

*Standards and
Assessment Guide*

Web Technologies

Introduction

Welcome to the Standards and Assessment Guide (SAG), a comprehensive resource designed to support excellence in assessment practices for all skills competitions hosted at the WorldSkills Competition. A key component of the SAG is the commitment to continuous improvement through ongoing review, ensuring that these guides consistently reflect the latest industry innovations and high standards of assessment in an open and transparent manner.

Purpose

The primary purpose of this guide is to provide a structured framework for the consistent and fair assessment of each skill competition. It aims to ensure that all assessments are conducted with a high degree of accuracy, reliability, validity, and reflect global industry standards. By adhering to these guidelines, assessors can maintain the integrity of the competition and uphold the high standards associated with WorldSkills.

Note: this guide is not a replacement for the Marking Scheme and should only be used as a reference when required during the assessment process. Competitors are not allowed to have a copy of this SAG in the workshop in either digital or paper form.

Scope

This document covers general assessment practices applicable to a diverse range of industry sectors including:

- Manufacturing and Engineering Technology
- Information and Communication Technology
- Construction and Building Technology
- Transportation and Logistics
- Social and Personal Services
- Creative Arts and Fashion

Each skill competition has its unique requirements and benchmarks, which are detailed within sections of this guide. The consistency of assessment across each skill is the overarching principle, ensuring a unified approach to evaluating Competitor performance to the highest standards.

Key Components

The guide is structured into several key components, each addressing critical aspects of the assessment process:

Assessment Principles and Objectives

- Emphasis on fairness, transparency, and objectivity in assessments.
- Alignment with global industry standards and best practices.

Assessment Methods and Tools

- Description of various assessment methods in Measurement (**M**) and Judgement (**J**).
- Guidance on the application of appropriate assessment tools and equipment (if applicable).

Criteria and Benchmarks

- Examples of assessment criteria and aspects for each skill, outlining the expected competencies and performance standards.
- Benchmarks for different levels of proficiency i.e. Judgement award range 0, 1, 2, 3; Nominal criteria where the expert counts observable conditions met out of a defined total (e.g. 3 out of 5); or Yes/No criteria — alongside clear measurable descriptors.

Expert assessment requirements

- Completion of the Access Programme.
- Approved Curriculum Vitae (CV).
- Reaching **100%** Expert preparedness.
- Full participation of online and in-person Mandatory Assessment Training (MAT).
- Completion of practical assessment testing at the Competition.

Quality Assurance and Improvement

- Monitoring and evaluation: Ensuring assessments are carried out correctly and produce reliable results.
- Continuous improvement: Using feedback from Experts and Skill Competition Managers to enhance future assessments.
- Periodic review: Regularly updating processes to reflect current industry and WorldSkills standards.

Implementation

For effective implementation, this guide should be used for guidance purposes only and in parallel with the *Technical Description* for each skill. Experts are encouraged to familiarize themselves thoroughly with both the general guidelines and the particular requirements of their respective skill areas. Collaborative efforts between the *Skill Management Team*, *Experts*, and *Competitors* are vital for achieving the ultimate goal of global skills development.

Conclusion

The *Standards and Assessment Guide* embodies the commitment of the WorldSkills movement to nurturing talent and promoting the highest standards of vocational education and training worldwide. By providing clear and comprehensive guidance, we aim to empower Experts to conduct marking and assessment practices that are not only rigorous and equitable but also inspiring and transformative for all participants.

Thank you for your dedication to upholding these standards and contributing to the success of the WorldSkills Competition. Together, we can continue to champion skills excellence and celebrate the achievements of talented individuals from around the globe.

Measurement

Measurement is used to assess accuracy, precision, and other performance that can be measured objectively. It is used where ambiguity must be avoided.

The total marks allocated to measurement marking may vary from competition to competition depending on the Test Project.

Judgement

Judgement is used to assess the quality of performance about which there may be small differences of view when applying the external benchmarks.

The Example and comments column in the table below may include all kinds/formats of examples such as a link to a YouTube video, a website link, an illustration, a photo, a reference to a book, and so on. It needs to be as detailed as possible to show the differentiation between 0, 1, 2, 3.

Generic rules

The assessment group consists of three Experts and one supervising Expert. The supervisor replaces any Expert in the group where necessary to avoid compatriot marking. The scores given by the three marking Experts must not differ by more than 1 point. If the difference exceeds 1, the Experts must re-score until all three scores fall within a maximum spread of 1. Once this condition is met, the result can be entered into the CIS.

The total marks allocated to judgement marking may vary from competition to competition depending on the Test Project.

Aspect – Quality and clarity of GIT commit messages

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
1	3	All commit messages have a clear title, an empty line, and a detailed description of the changes. The content is self-explanatory, allowing readers to understand the changes without viewing the code diff.	Every commit message is well-structured and provides sufficient context for understanding the changes independently.
	2	All commit messages have a clear title, an empty line, and a description, but the details are unclear or repetitive, making it hard to understand the changes.	Commit messages follow the structure but lack clarity, requiring readers to view the code diff for complete understanding.
	1	One or more commit messages contain only a single line of content.	Some commit messages are too brief, providing minimal information and requiring readers to view the code diff for context.
	0	One or more git messages have only one line of content, which contains only one or two words, such as "update".	Some commit messages are almost empty, offering no useful information about the changes and necessitating a thorough review of the code diff to understand the updates.

Aspect – Effective use of modern frameworks and best practices

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
1	3	A modern framework is used comprehensively and according to best practices. All suitable features of the framework are utilized effectively, and the code follows established patterns for maintainability, scalability, and efficiency.	A framework is used extensively and correctly, following all best practices. The code is efficient and maintainable.
	2	A modern framework is used, and most of its features are implemented correctly. However, there are instances where best practices are not followed, leading to inefficient or suboptimal code.	A framework is used correctly in most parts, but there are sections where best practices are not followed.
	1	A modern framework is used, but its implementation largely ignores best practices. There is excessive manual coding where the framework's features could have been utilized.	A framework is used, but most of the code is written manually without leveraging the framework's features.
	0	No modern framework is used. The project relies entirely on manual coding without leveraging any established frameworks.	No framework is used, only manual coding.

Aspect – The project is accessible via required URL

WSOS as per TD	SCORE	Measurement Score Description	Example and comments
2	The project is accessible via the required URL provided in the guidelines.		URL Provided: <i>http://example.com/XX/module_A</i>
	Y		The page loads correctly and displays the contestant's project as expected
	N		The URL leads to an error page indicating the project was not found. The URL loads a different contestant's project, not the one specified. The URL is incorrect and doesn't work. The URL needs login details which were not given to the judges. The project is in the wrong folder, not as mentioned in the guidelines. For example: <i>http://example.com/XX/module_A/home_demo</i>

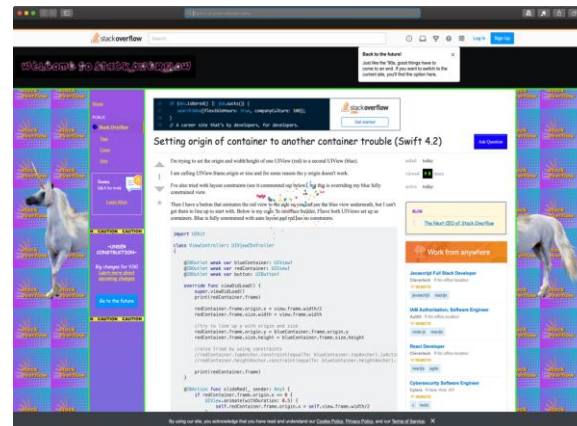
Aspect – Login data for Admin created as described

WSOS as per TD	SCORE	Measurement Score Description	Example and comments
2		The admin login data is created exactly as described in the guidelines.	
	Y		The admin username and password are provided in the specified format and location, and work without any issues.
	N		The project does not include any admin login credentials, making it impossible to access the admin panel. The provided admin username and password do not match what was specified in the guidelines, resulting in failed login attempts. Only a username is provided without a corresponding password, or vice versa.

Aspect – The website achieves a concept to meet main business requirements

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	The website achieves the main business requirements with the improvements and extends the main objective	Example – Registration form or login form The competitor resets the form after the submission to prevent multiple submissions of the form.
	2	The website achieves the main business requirements, and some improvements can be added for the main objective.	The form works with more than the minimum possible requirements. For example - the form works with validations, captions, placeholders, suggestions, attention towards the details etc.
	1	The website is simple, and the main objective is achieved.	The form works with minimum requirements. For example - the form works but no validations, no captions, no placeholders, no suggestions, no attention towards the details etc.
	0	The website is not related with the goal at all.	The form does not work or is not present

Aspect – Creative use of media

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	Media were used in a creative and differentiated way to highlight and promote design.	The website uses a mix of high-quality videos, animations, and/or interactive elements to creatively showcase the design.
	2	Some media files were updated/created used for improving design.	The website includes some newly created or updated media files, such as updated images and short promotional clips, to enhance the design.
	1	Basic use of supplied media matches the objective	The website uses basic media, such as standard images and pre-made graphics, that were provided. These media files match the design objective but do not add any unique or creative elements to the presentation.
	0	The media used is not related to the objective.	The media used on the website are irrelevant to the design objective. For instance, random photos and unrelated content are used, which do not support or promote the design in any meaningful way. 

Aspect – The images chosen for features presenting can enhance the understanding of the game platform and features

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	The screenshots and images of features in the design is clear and features are large enough for reader to understand at a glance.	The images make it easy to understand the game platform and features at a glance.
	2	The screenshots and images of features in the design is clear, but taken in large resolution so reader cannot easily read each screen	The images are clear but too large, making details hard to read quickly.
	1	Part of the screenshot and images of features in the design is not clear, or is blurry, or not readable.	Some images are blurry or hard to read.
	0	Most of the screenshot and images of features in the design are blurry or not readable. Or not related to the mentioned features.	Most images are blurry, hard to read, or irrelevant.

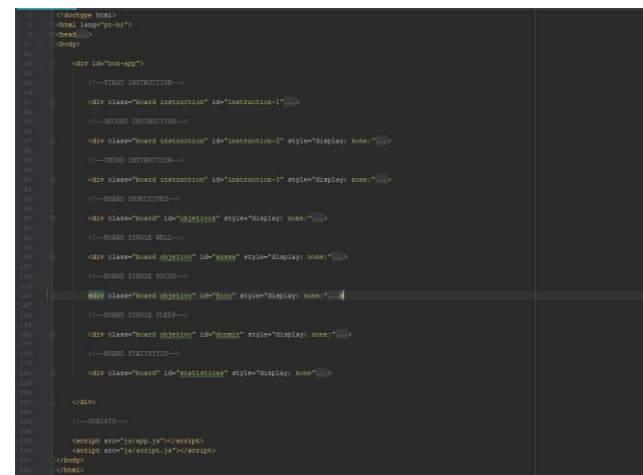
Aspect – The meta thumbnail looks good when sharing

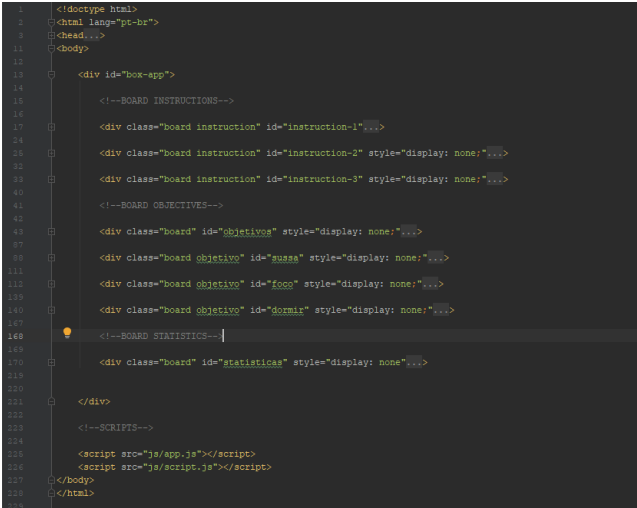
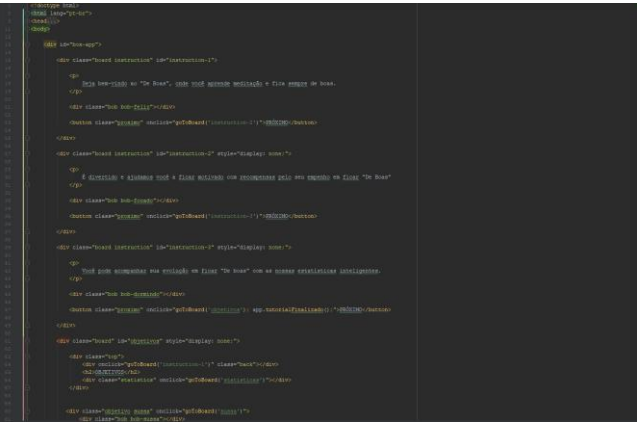
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	The image attracts readers to click from shared social network. And show the reader that this website is powered by mature and professional brand, with good quality of games.	The thumbnail shows a high-quality image of a popular game character with the website's logo. It has vibrant colours and a sleek design, clearly indicating the professional nature of the game brand. When shared on social networks, it immediately grabs attention and invites clicks.
	2	The image attracts reader to click from shared social network	The thumbnail features an exciting game scene with good resolution. It attracts clicks because it looks engaging and relevant to gaming, even though it lacks some branding elements.
	1	The image has elements aligned but the colours and spacing combination not attracting readers.	The thumbnail includes a game screenshot, but the colours are dull, and the spacing makes the image look crowded. While the elements are aligned, it doesn't stand out enough to attract many readers.
	0	The alignment, colours, spacing, and elements are not readable and not attractable at all	The thumbnail is a low-quality image with poor alignment and clashing colours. The elements are too small to be readable, and the overall design is unattractive, failing to draw any clicks or interest.

Aspect – Final project matches the given design files

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	The design and the website are identical.	The final website perfectly replicates the wireframes and mock-ups, with exact matches in layout, colour scheme, typography, and all visual elements.
	2	It is hard to find differences between the design and the website.	The website closely matches the design files, with only very slight, almost unnoticeable variations, such as minor spacing adjustments or slight colour shade differences.
	1	There are minor differences between the design and the website.	The website has a few small discrepancies compared to the design files, such as different font sizes, slight variations in button placement, or minor colour differences.
	0	There is a clear difference between the design and the website.	The website significantly deviates from the design files, with major differences in layout, missing elements, different colour schemes, or overall design not aligning with the provided wireframes or/and mock-ups.

Aspect – Create easy-to-maintain HTML code

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	HTML code is very well organized with good indentations and comments, clearly identifying elements to facilitate maintenance.	The HTML code is neatly structured with consistent indentation. Each section of the code includes descriptive comments, making it easy to understand and maintain.  <pre> <!doctype html> <html lang="ja-jp"> <head> <body> <div id="box-app"> <!--FIRST INSTRUCTION--> <div class="board instruction" id="instruction-1"> <!--SECOND INSTRUCTION--> <div class="board instruction" id="instruction-2" style="display: none;"> <!--THIRD INSTRUCTION--> <div class="board instruction" id="instruction-3" style="display: none;"> <!--BOARD INSTRUCTIES--> <div class="board" id="instructon" style="display: none;"> <!--BOARD SINGLE WELL--> <div class="board shikiji" id="single" style="display: none;"> <!--BOARD SINGLE POVER--> <div class="board shikiji" id="flop" style="display: none;"> <!--BOARD SINGLE KUP--> <div class="board shikiji" id="single" style="display: none;"> <!--BOARD INSTRUCTIES--> <div class="board" id="instructon" style="display: none;"> </div> <!--SCRIPT--> <script src="js/app.js"></script> <script src="js/script.js"></script> </body> </html> </pre>

	2	HTML code has good indentation and a few comments.	The HTML code is well-indented and includes some comments for key sections, though not as comprehensive.  <pre> 1 <!doctype html> 2 <html lang="pt-br"> 3 <head> 11 <body> 12 13 <div id="box-app"> 14 15 <!--BOARD INSTRUCTIONS--> 16 17 <div class="board instruction" id="instruction-1"> 24 25 <div class="board instruction" id="instruction-2" style="display: none;"> 32 33 <div class="board instruction" id="instruction-3" style="display: none;"> 40 41 <!--BOARD OBJECTIVES--> 42 43 <div class="board" id="objetivos" style="display: none;"> 44 45 <div class="board objetivo" id="suasa" style="display: none;"> 46 47 <div class="board objetivo" id="foco" style="display: none;"> 48 49 <div class="board objetivo" id="dormir" style="display: none;"> 50 51 <!--BOARD STATISTICS--> 52 53 <div class="board" id="estatisticas" style="display: none;"> 54 55 </div> 56 57 <!--SCRIPTS--> 58 59 <script src="js/app.js"></script> 60 <script src="js/script.js"></script> 61 </body> 62 </html> </pre>
	1	HTML code has good indentation.	The HTML code is neatly indented but lacks comments.  <pre> 1 <!doctype html> 2 <html lang="pt-br"> 3 <head> 4 <script> 5 </script> 6 </head> 7 <body> 8 9 <div id="box-app"> 10 11 <div class="board instruction" id="instruction-1"> 12 13 <div class="board instruction" id="instruction-2" style="display: none;"> 14 15 <div class="board instruction" id="instruction-3" style="display: none;"> 16 17 <div class="board" id="objetivos" style="display: none;"> 18 19 <div class="board objetivo" id="suasa" style="display: none;"> 20 21 <div class="board objetivo" id="foco" style="display: none;"> 22 23 <div class="board objetivo" id="dormir" style="display: none;"> 24 25 <div class="board" id="estatisticas" style="display: none;"> 26 27 </div> 28 29 </body> 30 </html> </pre>

0

Many parts of the HTML code are unorganized, without indentation and comments.

The HTML code is disorganized, lacks proper indentation, and has no comments, making it difficult to maintain.

```

<doctype html>
<html lang="pt-br">
<head>
<body>

<div id="root-app">

<div class="board instruction" id="instruction-1">

<p>És um jogador do "De Buar", você está aprendendo a fazer jogadas de Buar.</p>

<div class="bot bot-fake"></div>

<button class="play" onclick="goToBoard('instruction-1')">JOGAR</button>

</div>

<div class="board instruction" id="instruction-2" style="display: none;">

<p>É divertido e simples você é jogado no tabuleiro com pedras brancas e jogas no lugar "De Buar"</p>

<div class="bot bot-fake"></div>

<button class="play" onclick="goToBoard('instruction-2')">JOGAR</button>

</div>

<div class="board instruction" id="instruction-3" style="display: none;">

<p>Você pode acompanhar sua estratégia no lugar "De Buar" com as nossas estatísticas inteligentes.</p>

<div class="bot bot-fake"></div>

<button class="play" onclick="goToBoard('statistics')">ver estatísticas</button>

</div>

<div class="board" id="playing" style="display: none;">

<div class="top">

<div class="go" onclick="goToBoard('instruction-1') class="bot"></div>

<div class="go">

<div class="statistics" onclick="goToBoard('statistics')"></div>

</div>

<div class="bottom" style="display: none;">

<div class="bot bot-fake"></div>

<div class="info">

<div class="go">

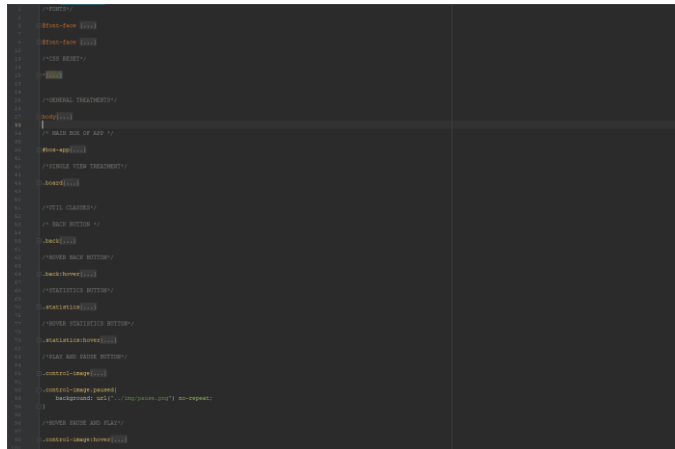
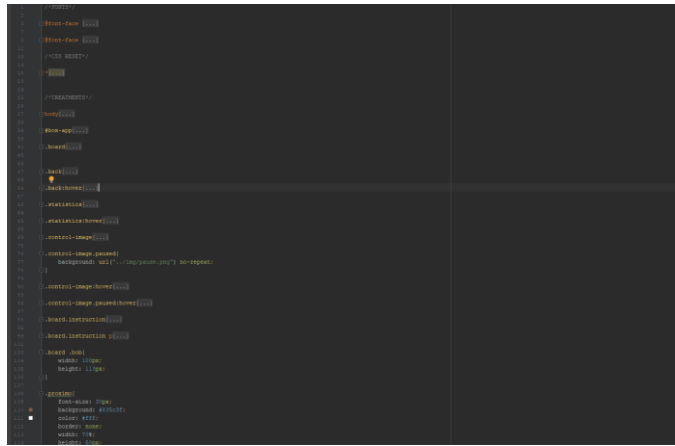
<div class="go">

</div>

</div>

```

Aspect – Create easy-to-maintain CSS code

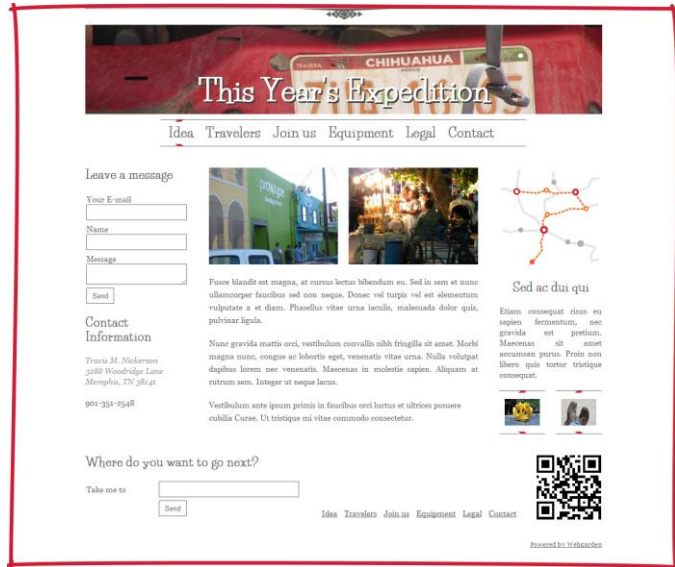
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	CSS code is very well organized with good indentations and comments to facilitate maintenance. A group technique is used for related code, and meaningful names are used for classes and IDs.	
	2	CSS code has good indentation and a few comments. Meaningful names are used for classes and IDs.	

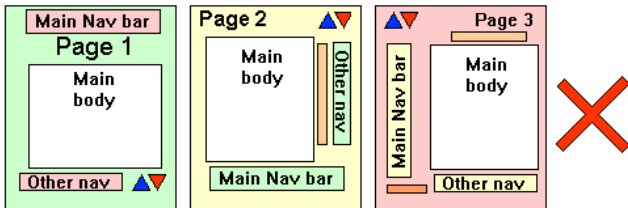
Aspect – Image quality and optimization

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Media files have excellent image treatment and are fully optimized for various devices and sizes, significantly enhancing the website's visual appeal and loading times while effectively promoting its objectives.	High-resolution images are properly cropped, colour-corrected, and optimized for different devices and screen sizes. They load quickly and integrate seamlessly with the website's design, making it visually appealing and professional.
	2	Most media files are well-treated and optimized, but some minor issues can be found.	The majority of images are well-optimized and visually appealing, with only a few instances of minor imperfections like slight blurriness or inconsistent colour correction. A few images may not be perfectly optimized for all devices, slightly affecting load times.
	1	Media files have basic image treatment and some optimization.	Images are used as-is with minimal adjustments and basic optimization. They are functional but lack enhancements that could improve the website's visual appeal and loading times, such as proper cropping, colour correction, or optimization for different devices.
	0	Media files have significant issues, are poorly optimized, and do not support the website's objectives.	Images are poorly treated, with noticeable problems such as low resolution, improper cropping, pixelation, or colour issues. They are not optimized for different devices, resulting in slow loading times and a poor user experience.

Aspect – Implementation of Information Hierarchy

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	The implementation has a perfect hierarchy among all elements, making it easy for users to understand the author's narrative.	https://www.interaction-design.org/literature/article/visual-hierarchy-organizing-content-to-follow-natural-eye-movement-patterns The website uses consistent headings, subheadings, and content blocks to clearly distinguish between different sections. Visual cues like font size, weight, and colour are used effectively to guide the user through the content in a logical order.  The first example is a poster for 'The Night Market' featuring a gradient background and clear typography. The second example is a menu for 'CABRAGE HOUSE CAFE' with distinct sections for Breakfast, Snacks, Salads, and Soup, each with a clear heading and list of items.

	2	There is a good hierarchy between the elements, with some adjustments needed to make it excellent.	The website generally distinguishes between major and minor content well, but a few areas could benefit from improved spacing, font size adjustments, or better visual differentiation to enhance readability and flow.
	1	There is a basic hierarchy among the design elements, but many need improvement.	The website shows some attempt at structuring content with headings and subheadings, but the visual differences between these elements are minimal, making it harder for users to follow the narrative. Improvements in alignment, spacing, and contrast are needed. 

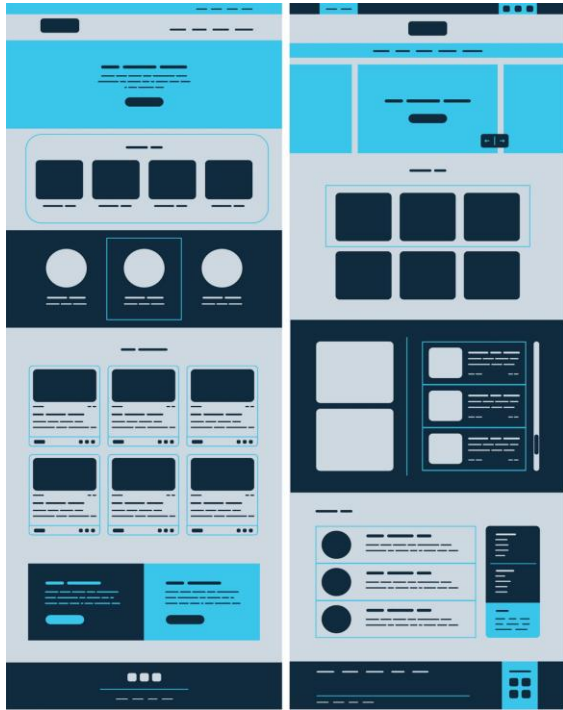
	0	There is no clear hierarchy in the design elements used.	The website lacks a clear structure, with all content appearing equally important. There are no visual distinctions between headings, subheadings, and body text, resulting in a confusing and disorganized presentation that makes it difficult for users to understand the content flow. Inconsistent page design. 
--	---	--	---

Aspect – Effective Use of Typography for Readability

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Typography is used perfectly to enhance readability, with clear hierarchy and appropriate use of font sizes, styles, and whitespace.	The website employs a well-balanced combination of font sizes and styles for headings, subheadings, and body text. Adequate whitespace is used around text elements, ensuring a clean and easily readable layout. The text hierarchy is clear and guides the reader smoothly through the content. Good Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere orci quis ligula. Donec egestas massa vulputate nisl. Curabitur venenatis. Nullam egestas facilisis ante. Suspendisse tincidunt. Etiam vitae leo id mauris laoreet luctus. Cum sociis natoque penatibus et magnis dis parturient montes. Too Little Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere orci quis ligula. Donec egestas massa vulputate nisl. Curabitur venenatis. Nullam egestas facilisis ante. Suspendisse tincidunt. Etiam vitae leo id mauris laoreet luctus. Cum sociis natoque penatibus et magnis dis parturient montes. Too Much Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere orci quis ligula. Donec egestas massa vulputate nisl. Curabitur venenatis. Nullam egestas facilisis ante. Suspendisse sociis natoque penatibus et magnis dis parturient montes.  font-size: 16px; line-height: 0; If there is one piece of design advice I could give to non-designers, it would be to use space liberally. By adding generous spacing to your composition, you can elevate your design from looking like a dull, uninviting interface to a beautiful, highly polished experience. Spacing can enhance almost everything on your design from typography to layout, but its also important to approach it with a great deal of care.  font-size: 16px; line-height: 1.5em; If there is one piece of design advice I could give to non-designers, it would be to use space liberally. By adding generous spacing to your composition, you can elevate your design from looking like a dull, uninviting interface to a beautiful, highly polished experience. Spacing can enhance almost everything on your design from typography to layout, but its also important to approach it with a great deal of care.

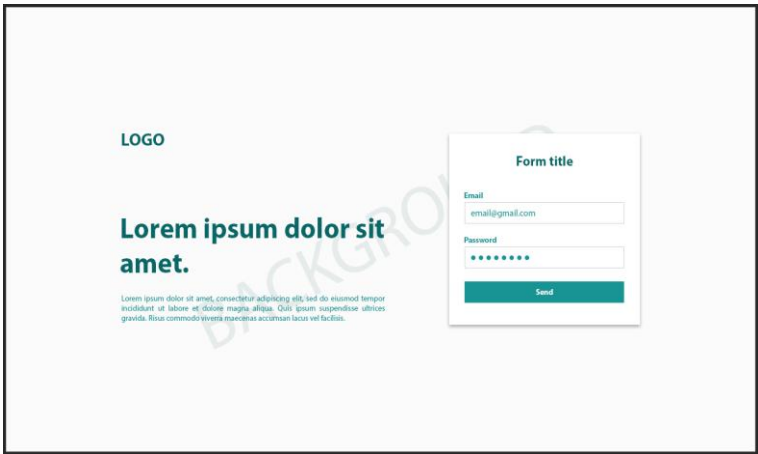
	2	Typography enhances readability with a good hierarchy, though minor adjustments could improve the overall effect.	The website uses different font sizes and styles to create a readable structure, but some sections might benefit from more whitespace or slight adjustments in font size to enhance clarity and flow. Overall, the text is readable but could be improved with minor tweaks.
	1	Basic use of typography creates a minimal hierarchy, but many areas need improvement to enhance readability.	The website shows an attempt to use varying font sizes and styles for different text elements, but the differences are not pronounced enough. Whitespace is inconsistently applied, leading to a somewhat cluttered appearance. Several sections require better spacing and font size differentiation.
	0	Typography is poorly used, with no clear hierarchy or consideration for readability.	The website uses a uniform font size and style throughout, with insufficient whitespace. This results in a visually overwhelming layout where all text appears equally important, making it difficult for users to read and follow the content.

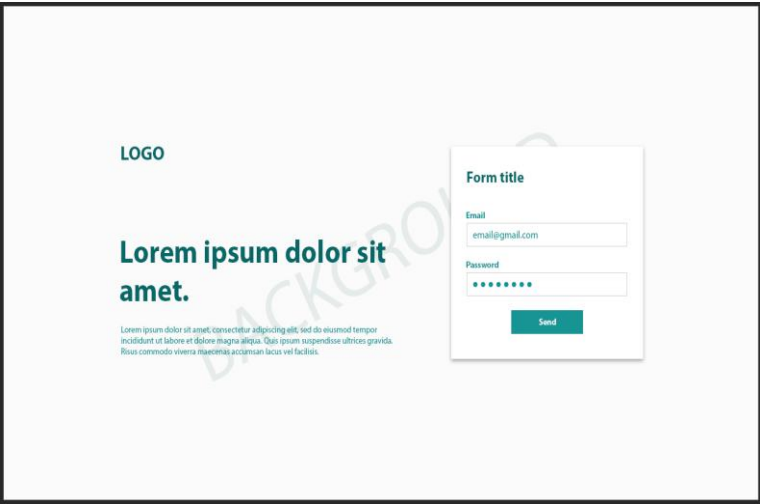
Aspect – Organization of content

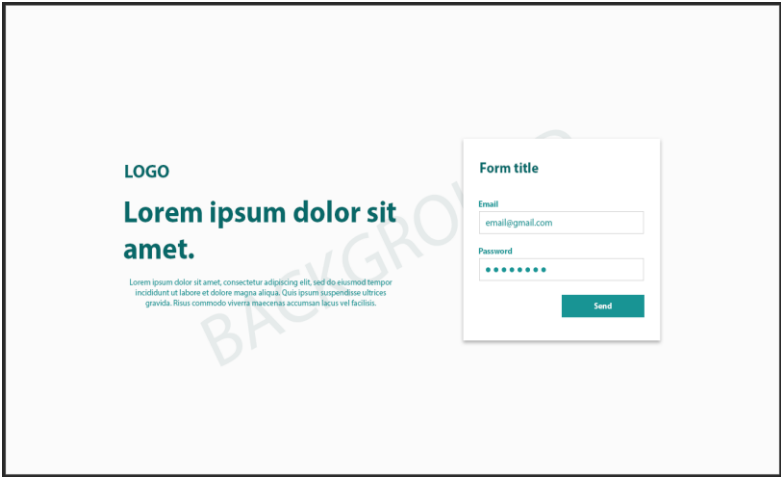
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	All content is perfectly organized, making it easy for users to follow and understand.	The website clearly divides content into logical sections with appropriate headings and subheadings. Each section contains relevant information, making it simple for users to navigate and comprehend the content. 

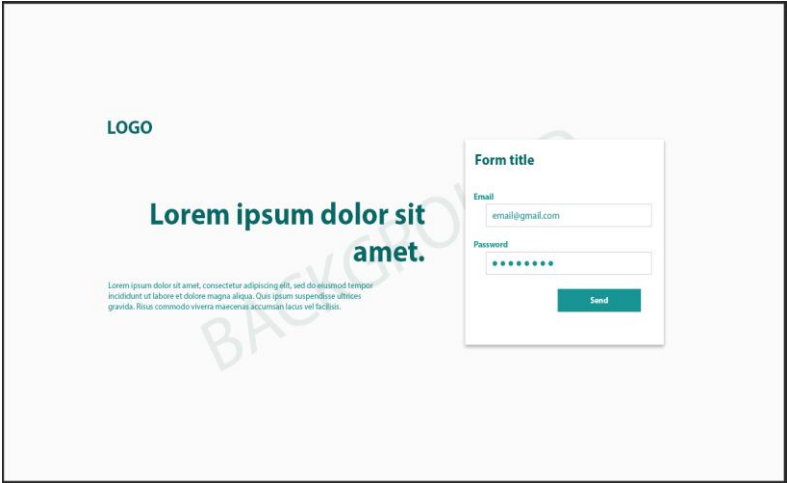
	2	Most content is correctly organized, with only minor improvements needed.	The website generally organizes content well, with logical groupings and clear headings. A few sections may need slight adjustments for optimal clarity, but overall, the content is easy to navigate.
	1	Some content is correctly organized, but many areas need better structuring.	The website shows an attempt to organize content, but several sections are misplaced or unclear. Users may find it challenging to follow the content flow due to inconsistent categorization.
	0	Content is poorly organized, leading to a disorganized and confusing layout.	The website lacks logical grouping of content, with information scattered randomly. There are no clear headings or sections, making it difficult for users to understand the structure and find relevant information.

Aspect – Alignment of elements

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	All elements are perfectly aligned, creating a cohesive and visually pleasing layout.	Every element on the website, including text, images, and buttons, aligns perfectly with grid lines and other elements. There are no visible misalignments, resulting in a clean and professional look. 

	2	Most elements are correctly aligned, with only one minor alignment issue.	The majority of elements on the website are well-aligned, but there is a single noticeable misalignment, such as a button or image slightly off-centre. This minor issue does not significantly impact the overall visual appeal. 
--	---	--	--

	1	Some elements are aligned, but there are several alignment problems.	The website shows an attempt at alignment, but multiple elements are misaligned, such as uneven spacing between text and images or inconsistent alignment of buttons. These issues affect the website's overall aesthetics and usability. 
--	---	--	--

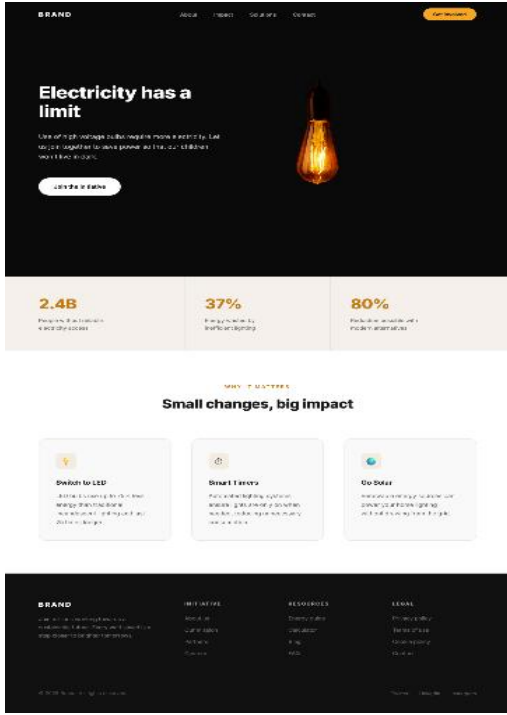
	0	The alignment of elements is messy, creating a disorganized appearance.	Elements on the website are placed haphazardly, with no regard for alignment. Text, images, and buttons are scattered without any consistent structure, resulting in a chaotic and unprofessional look. 
--	---	--	--

Aspect – Balance between text and image

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Perfect balance between text and images allows for easy understanding of the purpose of communication.	The website seamlessly integrates text and images, with each complementing the other. Images enhance the understanding of the text without overwhelming it, and the text provides necessary context to the images, resulting in a clear and effective communication. 
	2	Good balance between text and images, with a few minor issues in some areas of the design.	Most sections of the website have a well-maintained balance between text and images. However, there are a few areas where either the text slightly overwhelms the images or vice versa, but these issues do not significantly detract from the overall user experience. 

1	Basic balance between text and images, but with noticeable issues in many areas of the design.	The website shows an attempt to balance text and images, but several sections have issues such as too much text with small images, or large images with minimal text. These inconsistencies can make it harder for users to understand the content. 
0	There is either an excess or lack of text or images, resulting in poor communication.	The website has significant issues with balance, such as large blocks of text with no supporting images or pages filled with images and minimal explanatory text. This imbalance makes it difficult for users to grasp the intended message and purpose. 

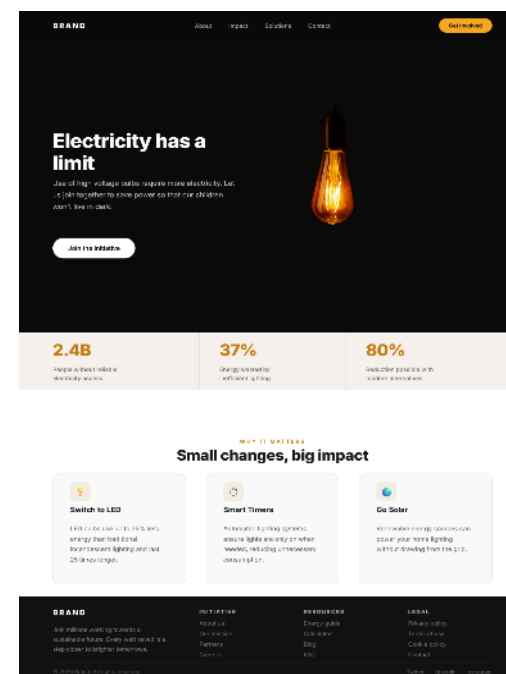
Aspect – Use of White space

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	The content is clearly identified due to the correct use of white space, and the white space is proportional between elements or blocks of content.	The website uses white space effectively to separate different sections, making the content easy to read and navigate. Each block of content has consistent and proportional white space around it, enhancing the overall visual clarity and user experience. 

2

The content is clearly identified due to the use of white space, but the white space is not proportional between elements or blocks of content.

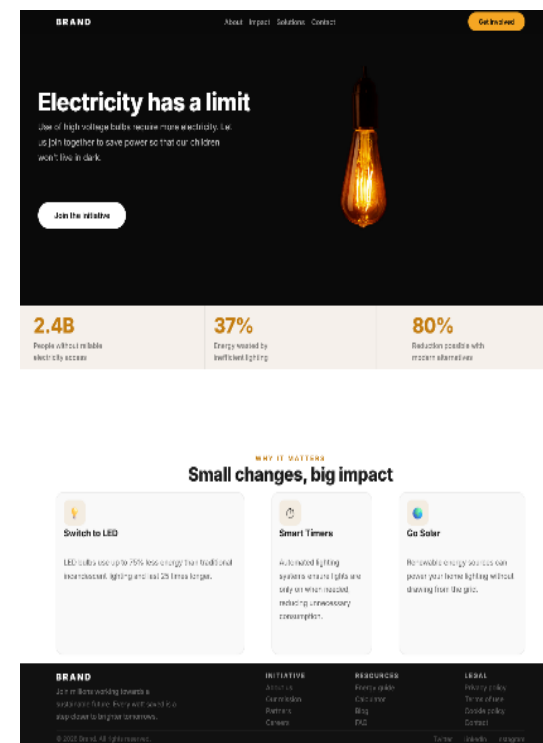
The website generally uses white space well to distinguish between sections, but there are some areas where the white space is inconsistent, leading to slight visual imbalance. These minor issues do not significantly affect readability.



1

There are numerous instances where white space is not proportional.

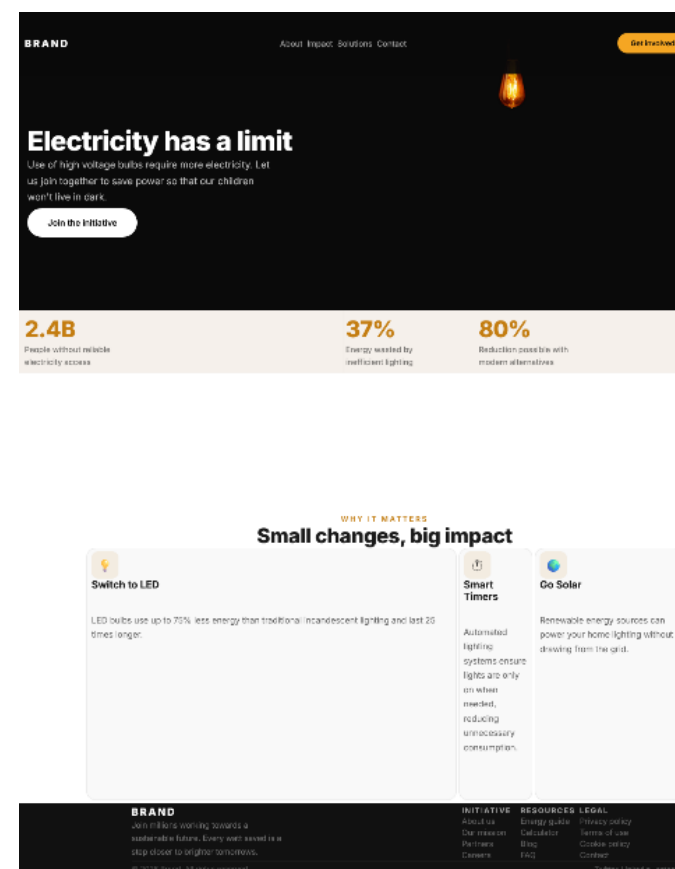
The website shows an attempt to use white space, but many sections have irregular spacing. Some elements may have too much white space, while others have too little, causing a cluttered or uneven appearance and affecting readability.



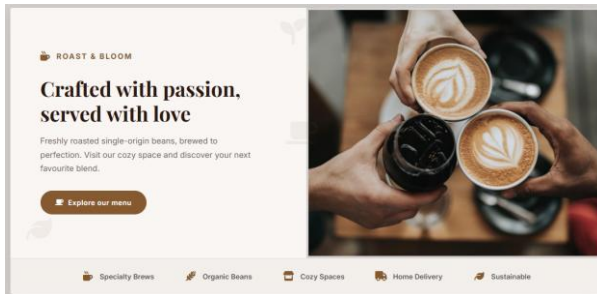
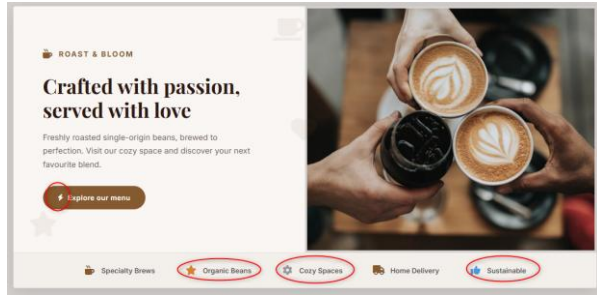
0

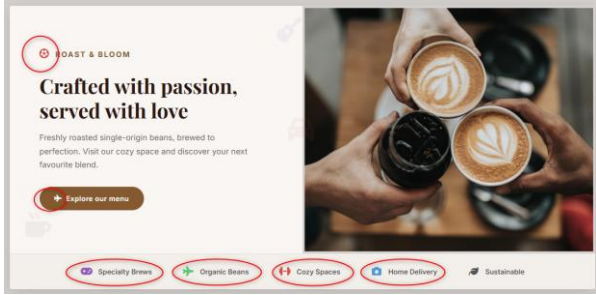
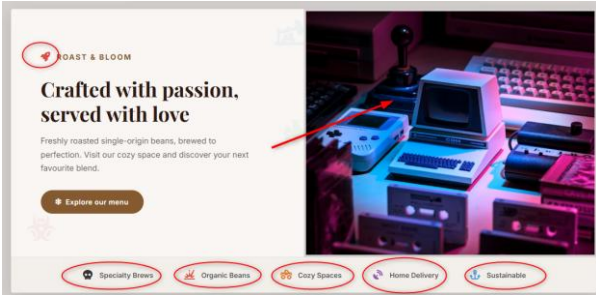
The use of little, excessive, or random white space strongly impairs readability and the identification/connection of elements.

The website's use of white space is poorly managed, with some areas appearing overcrowded while others are excessively empty. This randomness in white space distribution makes it difficult for users to read the content and understand the layout.



Aspect – Use of graphical elements to support design concepts

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	All graphical elements created or used are perfectly connected to the design concept, enhancing the overall theme and message.	The website integrates custom icons, illustrations, and graphics that align seamlessly with the design concept. Each element reinforces the theme, making the design cohesive and visually appealing. 
	2	Most graphical elements created or used are connected to the design concept.	The majority of icons, illustrations, and graphics used on the website align well with the design concept. A few elements may not be perfectly connected but do not detract significantly from the overall theme. 

1	Only a few graphical elements created or used are connected to the design concept.	The website has some icons and graphics that support the design concept, but many elements seem unrelated or inconsistent with the overall theme, leading to a disjointed appearance. 
0	The graphical elements created or used are not connected to the design concept.	The website uses random or irrelevant icons, illustrations, and graphics that do not support the design concept. This lack of connection results in a confusing and visually unappealing design. 

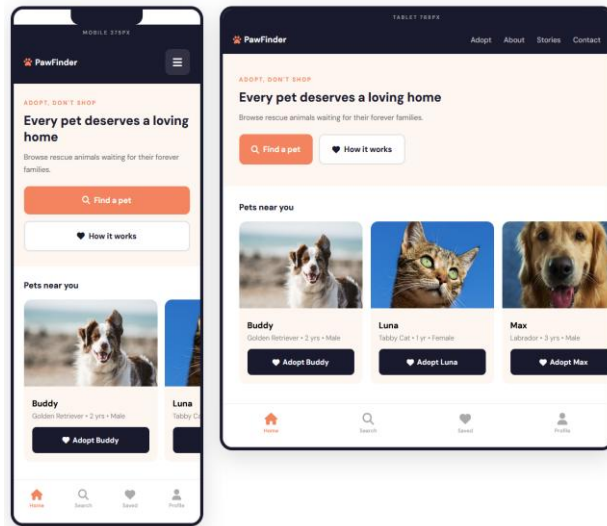
Aspect – Use of colour to improve the organization, readability and aesthetics

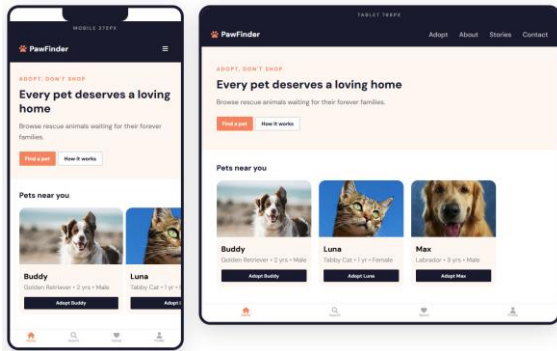
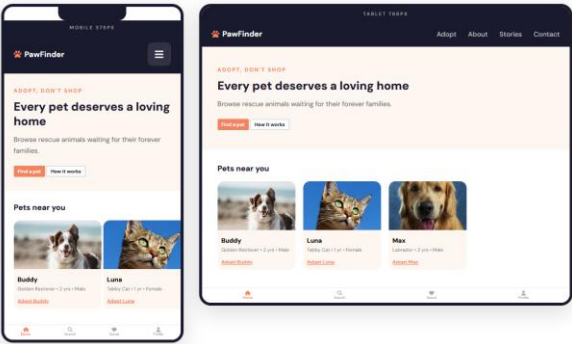
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Excellent use of colours, following the provided colour palette, to enhance organization, readability, and aesthetics. The choice of elements effectively directs user actions.	The website uses the colour palette skilfully to differentiate sections, highlight important elements, and guide user interactions. There is a clear visual hierarchy, with vibrant contrasts that enhance readability and a cohesive aesthetic that aligns with the design concept. 

	2	Good use of colours, following the provided palette, but with minor issues in the application of elements.	The website generally applies the colour palette well, with a clear distinction between different areas and effective use of contrast. However, some elements may not be optimally coloured, causing minor confusion or reducing visual appeal. 
	1	Basic use of the colour palette (limited to 2 colours or less) and poor use of elements to guide user actions.	The website uses a very limited colour palette, which restricts its ability to effectively organize content and direct user actions. The lack of colour variety results in a flat and less engaging design, with some areas potentially hard to distinguish. 

	0	Poor choice of colours without visual contrast, disregarding the provided colour palette.	The website fails to use the provided colour palette correctly, resulting in a lack of visual contrast and poor readability. The design appears disorganized and unappealing, with colours that do not support user navigation or the overall aesthetic. 
--	---	--	---

Aspect – Use adapted elements for different screen resolutions or different devices

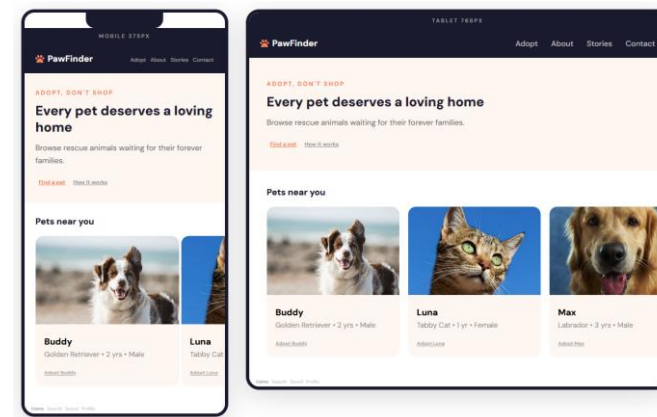
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Excellent distribution and adaptation of content for touch devices, ensuring a seamless user experience across all screen resolutions.	The website is fully responsive, with all elements perfectly adapted for touch devices. This includes intuitive touch gestures, optimized button sizes, and a layout that adjusts fluidly across various screen sizes, providing an exceptional user experience on mobile, tablet, and desktop devices. 

2	Elements are well-adjusted for touch devices, incorporating single-touch functionalities effectively.	The website adjusts most elements for touch devices, with functionalities like swipe navigation, tap-to-expand content, and touch-friendly buttons. However, a few minor elements may not be perfectly optimized, but overall, the site works well on touch devices. 
1	Only a single element has been adjusted for touch devices.	The website shows an attempt to adapt for touch devices, with perhaps a single feature like a touch-friendly menu or larger buttons. However, the majority of the content and elements are not optimized for touch interactions, resulting in a subpar mobile experience. 

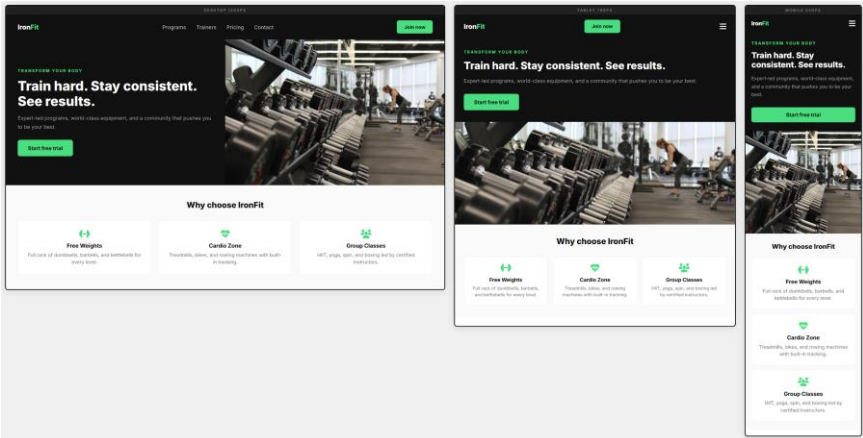
0

No elements are adapted for touch devices, leading to a poor user experience on mobile.

The website does not incorporate any adjustments for touch devices. Elements are difficult to interact with on mobile screens, and the layout does not adjust to different screen resolutions, resulting in a frustrating experience for mobile users.



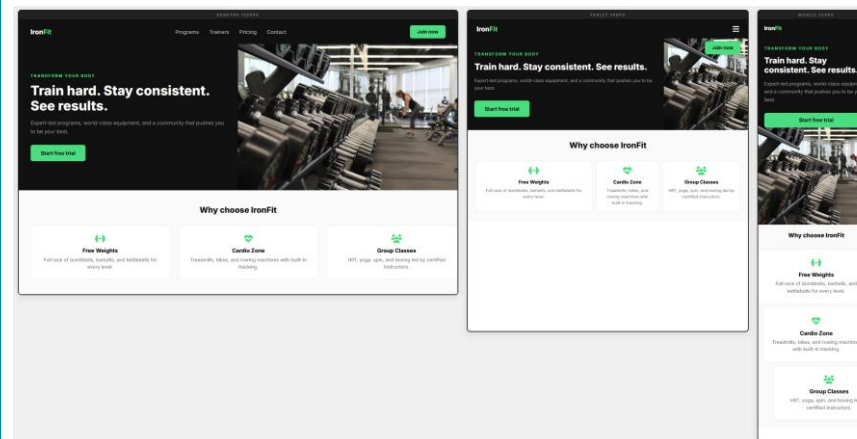
Aspect – Responsive website layout

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	Excellent responsive design, with all elements adjusting well when the browser is resized between 320px and 1330px.	The website layout is fully responsive, with all elements, including text, images, and columns, adapting perfectly across all screen sizes within the specified range. There is no horizontal scrolling, and all content is easily readable and visually appealing. 

2

Good responsive layout, with most elements adjusting well when the browser is resized.

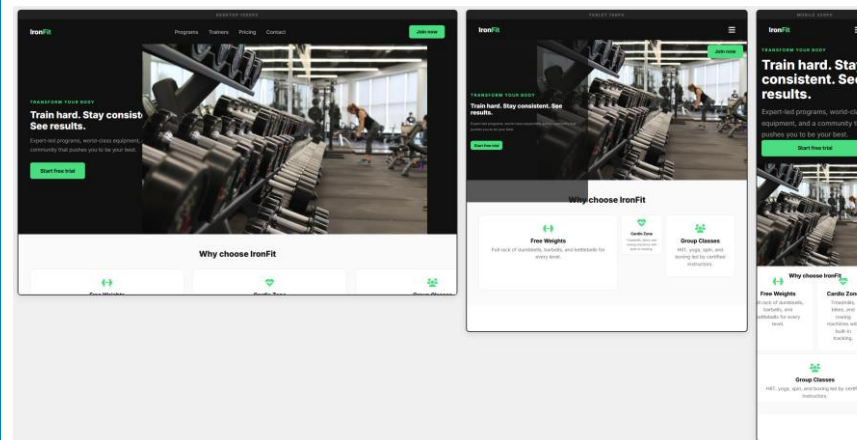
The majority of the website's elements, including text, images, and interactive components, adjust effectively to various screen sizes. There may be minor issues such as slight misalignments or occasional horizontal scrolling, but overall, the site remains functional and readable across different devices.

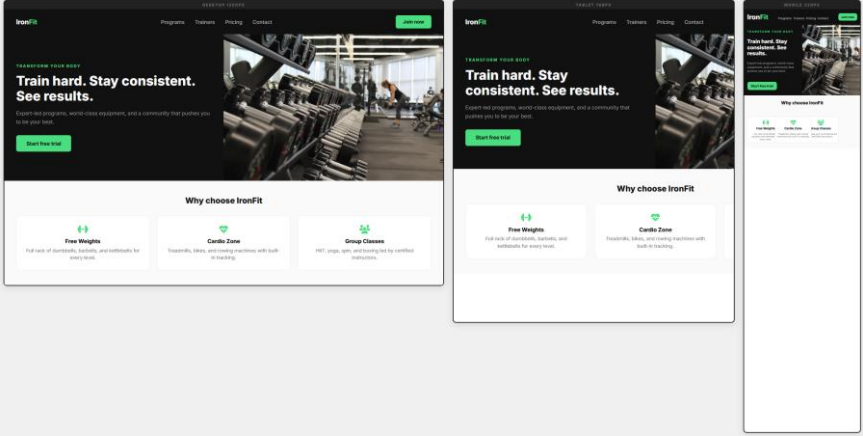


1

Basic responsive design implemented, with some elements adjusting when the browser is resized.

The website has a minimal level of responsiveness, where key elements such as the navigation menu and some images adapt to different screen sizes. However, other elements may not resize properly, leading to some readability and usability issues.



	0	No responsive design implemented.	The website does not adapt to different screen sizes. When the browser is resized, elements remain static, leading to significant usability issues, such as unreadable text, overlapping content, and extensive horizontal scrolling. 
--	---	-----------------------------------	--

Aspect – Search Engine Optimization (SEO)

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	All essential and advanced SEO practices are implemented.	The website leverages SEO best practices, including keyword optimization, fast page load times, mobile optimization.
	2	Most essential SEO practices are implemented.	The website employs good SEO practices, including optimized title tags, meta descriptions, alt text for images, clean URL structures, and proper use of headers.
	1	Basic SEO practices are implemented.	The website includes essential SEO elements like title tags, meta descriptions, and alt text for images but lacks more advanced SEO strategies.
	0	No SEO practices are implemented.	The website lacks basic SEO elements such as meta tags, alt attributes for images, and proper URL structures.

Aspect – Use of CSS animations for enhancing design implementation

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	Excellent use of CSS animations, with all animations enhancing the user experience and contributing to a cohesive design.	The website utilizes advanced animations that are smooth and purposeful, making the site highly dynamic and engaging. All animations contribute to a cohesive and visually appealing design, providing clear feedback and guiding user interactions seamlessly.
	2	Good use of CSS animations, with most animations enhancing the visual experience.	The website features a variety of animations that improve the look and feel, such as smooth page transitions and animated elements that highlight important sections. The animations generally work well but may have minor issues.
	1	Basic CSS animations implemented, enhancing some visual aspects.	The website includes simple animations like button hovers or basic transitions. These animations provide slight visual enhancements but don't significantly impact the overall experience.
	0	No CSS animations implemented.	The website is static with no animated effects, resulting in a straightforward and plain user experience.

Aspect – Creation of Wireframes and/or Prototypes

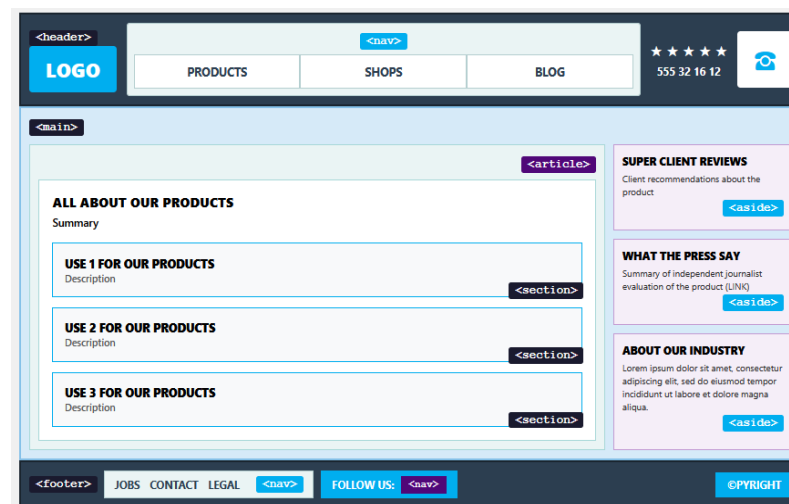
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
2	3	Highly detailed and interactive wireframes or prototypes are created.	The project features comprehensive wireframes or prototypes that accurately represent the final design, including all interface elements and interactions, making it easy to visualize the user experience.
	2	Detailed wireframes or prototypes are created, showing most aspects of the UI and UX.	The project includes clear wireframes or prototypes that outline the layout and major interactions, giving a good understanding of the user experience.
	1	Basic wireframes or prototypes are created but lack detail.	Simple sketches or wireframes provide a rough layout of the UI, but they don't show detailed interactions or user experience.
	0	No wireframes or prototypes are created.	The project lacks any visual planning tools, making it difficult to understand the design before development starts.

Aspect – Deliver an accessible website

WSOS as per TD	S C O R E	Judgement Score Description	Example and comments
3	3	HTML5 semantic tags and ARIA (Accessible Rich Internet Applications) attributes are used comprehensively.	The website fully integrates HTML5 semantic tags and ARIA attributes such as role, aria-label, aria-pressed, and aria-modal. This ensures that all interactive elements are accessible, providing an inclusive experience for users with disabilities. <pre> Skip to main content <header> <nav aria-label="Main navigation"> FreshBite Menu Order now </nav> </header> <main id="main"> <section aria-labelledby="hero-h"> <h1 id="hero-h">Healthy meals delivered to your door</h1> <i class="fa-solid fa-utensils" aria-hidden="true"></i> Browse menu </section> <!-- Modal with ARIA --> <div role="dialog" aria-modal="true" aria-labelledby="m-title"> <h2 id="m-title">Confirm order</h2> <button aria-label="Confirm">Confirm</button> <button aria-pressed="false">Cancel</button> </div> </main> <footer role="contentinfo"> <ul aria-label="Footer links"> Privacy </footer> </pre>

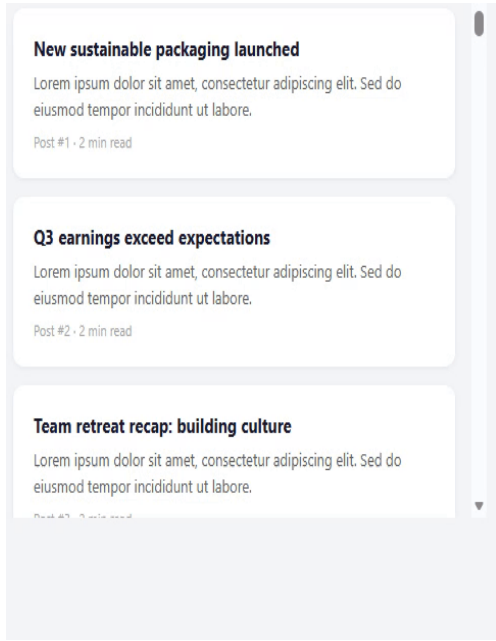
2 HTML5 semantic tags are used correctly, such as header, footer, aside, nav, article, and others.

The website employs HTML5 semantic tags effectively, creating a logical and meaningful structure. This improves the overall accessibility and navigability for screen readers, but it may still lack some advanced accessibility features.



1	Basic accessibility features like alternative text for images and titles for anchor tags are used.	The website includes <code>alt</code> attributes for images and <code>title</code> attributes for links, providing minimal accessibility. However, it lacks a broader implementation of accessibility practices, making many elements still inaccessible. <pre> <!-- All divs, NO semantic tags, but HAS alt text and title on links --> <!-- no <header>, no <nav> --> <div class="nav"> <div>FreshBite</div> Menu Order now </div> <!-- no <main>, no <section>, no headings --> <div class="hero"> <div style="font-size:42px;font-weight:800">Healthy meals delivered</div> <!-- alt present --> Browse menu <!-- title present --> </div> <!-- no <article>, headings are styled divs --> <div class="features"> <div style="font-size:28px;font-weight:800">Why people love FreshBite</div> <div class="card"> <div style="font-weight:700">Fresh ingredients</div> <div>Organic produce delivered within 24 hours.</div> </div> </div> <!-- no <footer> --> <div class="footer"> <div>&copy; 2026 FreshBite</div> Privacy </div> </pre>
0	Incorrect or no semantic HTML tags for accessibility are being used.	The website uses generic tags like <code>div</code> and <code>span</code> without any semantic meaning or accessibility features. This results in a poor structure that is difficult for screen readers and other assistive technologies to interpret.

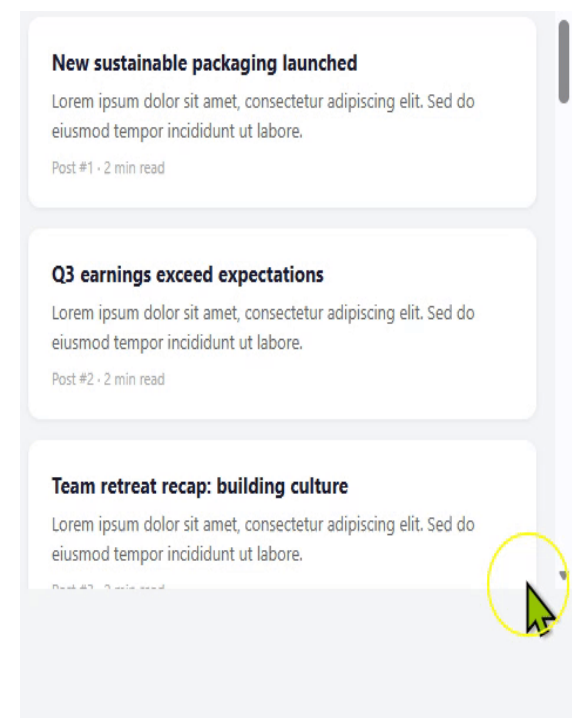
Aspect – The infinite scroll is smooth

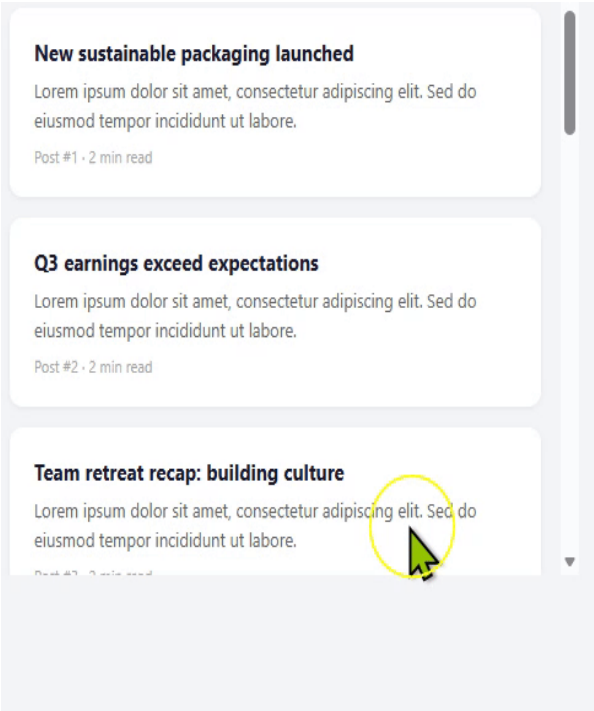
WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	It doesn't feel waiting to load. Pre-fetching timing is good that user can barely detect the scrolling loading	The content loads seamlessly as the user scrolls — new items appear instantly with no visible loading spinner or delay. Pre-fetching triggers early (e.g. when user reaches 70-80% of current content), so by the time they scroll to the bottom, the next batch is already rendered. The scroll experience feels like a single continuous page with no interruption. 

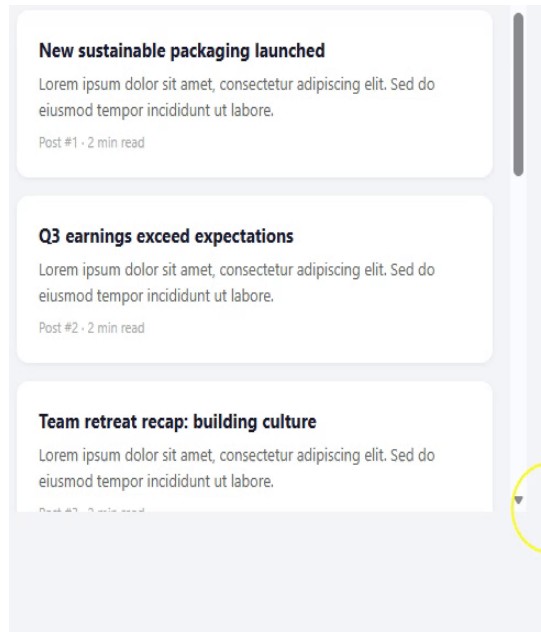
2

It almost doesn't feel the needs to wait and load. The pre-fetching is visible and still not lagging

The content loads as the user scrolls, but a brief loading indicator (spinner or skeleton cards) is visible for 0.5-1 second before new items appear. Prefetching triggers slightly late (e.g. when user reaches the very bottom), causing a short noticeable pause. The experience is still smooth overall — no page jumps or layout shifts — but the user can tell new content is being loaded.



	1	The infinite scroll keeps loading is slow and laggy	New content takes 2-3+ seconds to appear after scrolling to the bottom, with a visible spinner that blocks the view. The page may stutter or freeze briefly during loading. Content may jump or shift position when new items are inserted, causing the user to lose their scroll position. The experience feels sluggish and unreliable, requiring the user to wait repeatedly. 
--	---	---	--

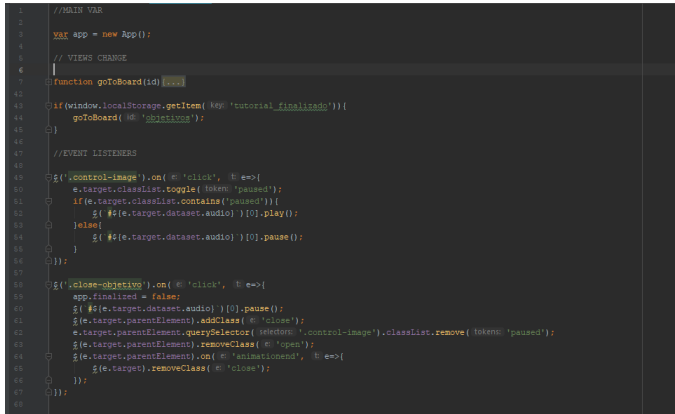
	0	Infinite scroll loading is not working almost	The infinite scroll is essentially broken — scrolling to the bottom either loads nothing, triggers an error or loads duplicate content. The implementation may cause the browser to hang, show blank white space at the bottom, or require a page refresh to see more content. In some cases, only the first batch of items ever loads. 
--	---	---	---

Aspect – Front-End error handling

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
4	This aspect measures whether the implemented front-end code works without generating errors in the console log.		
	Y		The solution works without any errors in the console log.
	N		The solution works with errors present in the console log

Aspect – Create easy-to-maintain JavaScript code

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	JavaScript code is very organized, with meaningful variable names, including perfect indentation and comments of the functions and methods	The code is highly readable and maintainable, with consistent indentation, descriptive variable names, and comprehensive comments that clearly explain the purpose and functionality of each function and method. <pre> 1 //MAIN VAR OF APP 2 3 var app = new App(); 4 5 // FUNCTION TO NAVIGATE BETWEEN VIEW 6 7 function goToBoard(id) { 8 9 // VERIFY IF THE USER FINISHED THE TUTORIAL 10 11 if(window.localStorage.getItem(key: 'tutorial_finalizado')){ 12 goToBoard(id: 'objectivo'); 13 } 14 15 //EVENT LISTENERS FROM PLAY AND PAUSE BUTTONS, AND YOUR ACTIONS 16 17 \$('#control-image').on('#click', '#e=>{ 18 e.target.classList.toggle('token: paused'); 19 if(e.target.classList.contains('paused')){ 20 \$('#e.target.dataset.audio')[0].play(); 21 }else{ 22 \$('#e.target.dataset.audio')[0].pause(); 23 } 24 }); 25 26 // EVENT LISTENER TO PAUSE THE AUDIO, WHEN CLOSE THE WINDOW WITHOUT FINISHES 27 28 \$('#close-objectivo').on('#click', '#e=>{ 29 app.finalized = false; 30 \$('#e.target.dataset.audio')[0].pause(); 31 \$(e.target.parentElement).addClass('#close'); 32 e.target.parentElement.querySelector('selector: control-image').classList.remove('token: paused'); 33 \$(e.target.parentElement).removeClass('#open'); 34 \$(e.target.parentElement).on('#tutorial:close', '#e=>{ 35 \$(e.target).removeClass('#close'); 36 }); 37 }); 38 </pre>

2	JavaScript code is well organized, with meaningful variable names, good indentation, and comments explaining most of the functions and methods.	The code is well-organized with clear variable names and some comments, but the comments do not fully explain the purpose and functionality of the functions and methods, leaving some gaps in understanding. 
1	JavaScript code has good indentation and meaningful variable names but lacks comments.	The code is properly indented and uses clear variable names, but it has no comments to explain the functionality of functions or methods, making it harder to understand the logic. 

	0	JavaScript code is unorganized, without indentation, and has no comments.	The code is difficult to read and understand, with no consistent structure or explanations, making maintenance and debugging challenging. <pre> 1 var app = new App(); 2 function goToBoard(id) {...} 27 if(window.localStorage.getItem(key: 'tutorial_finalizado')){ 28 goToBoard(id: 'objetivos'); 29 } 30 31 \$('#control-image').on(@ 'click', @ e=>{ 32 \$target.classList.toggle(token: 'paused'); 33 if(e.target.classList.contains('paused')){ 34 \$({ #e.target.dataset.audio })[0].play(); 35 }else{ 36 \$({ #e.target.dataset.audio })[0].pause(); 37 } 38 } 39 40 \$('#close-objetivo').on(@ 'click', @ e=>{ 41 app.finalized = false; 42 \$({ #e.target.dataset.audio })[0].pause(); 43 e.target.parentElement.addClass(@ 'close'); 44 e.target.parentElement.querySelector(selector: '.control-image').classList.remove(token: 'paused'); 45 e.target.parentElement.removeClass(@ 'open'); 46 e.target.parentElement.on(@ 'animationend', @ e=>{ 47 e.target.removeClass(@ 'close'); 48 }); 49 } 50 </pre>
--	---	--	--

Aspect – Create modular and reusable JavaScript code

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	JavaScript code is very organized, with meaningful variable names, perfect indentation, and comments explaining the functions and methods.	The code is highly readable and maintainable, with consistent indentation, descriptive variable names, and comprehensive comments that clearly explain the purpose and functionality of each function and method. <pre>function capitalize(word) { return word[0].toUpperCase() + word.slice(1); } function capitalizeElement(element) { var \$el = \$(element); \$el.text(capitalize(\$el.text())); } \$("button").click(capitalizeElement.bind(capitalizeElement, "h1"));</pre>
	2	JavaScript code has good indentation, meaningful variable names, and a few comments, but does not describe the functionalities of functions and methods.	The code is well-organized with clear variable names and some comments, but the comments do not fully explain the purpose and functionality of the functions and methods, leaving some gaps in understanding. <pre>function capitalizeHeading() { var heading = \$("h1").text(); var capital = heading[0].toUpperCase() + heading.slice(1); \$("h1").text(capital); } \$("button").click(capitalizeHeading);</pre>

	1	JavaScript code has good indentation and meaningful variable names but lacks comments.	The code is properly indented and uses clear variable names, but it has no comments to explain the functionality of functions or methods, making it harder to understand the logic. <pre>\$("button").click(function(){ var heading = \$("h1").text(); var capital = heading[0].toUpperCase() + heading.slice(1); \$("h1").text(capital); });</pre>
	0	JavaScript code is unorganized, without indentation, and has no comments.	The code is difficult to read and understand, with no consistent structure or explanations, making maintenance and debugging challenging. <pre>\$("button").click(function(){ var heading=\$("h1").text(); var c=heading[0].toUpperCase()+heading.slice(1); \$("h1").text(c); });</pre>

Aspect – All required information is clearly visible on the webpage

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
3	3	All required elements are present and easy to spot. Any additional information provided is clear and enhances the understanding.	The webpage includes all necessary elements, which are prominently displayed and easy to find. Additional information is relevant and clearly presented, contributing to a seamless user experience.
	2	One required element is missing, or additional information is confusing.	The webpage is mostly complete, with only one required element missing or some additional information that may confuse users. Overall, it functions well but has room for clarification and completion.
	1	Multiple required elements are missing.	The webpage includes some essential elements, but several key components are absent. This meets the minimum industry standard but requires significant improvement to be fully functional and user-friendly.
	0	Required information is not displayed at all.	The webpage fails to include any of the essential elements, making it incomplete and not functional for its intended purpose.

Aspect – Database structure is normalized

WSOS as per TD	SCORE	Judgement Score Description	Example and comments																																																																																																																																													
5	3	Normalized with third normal form (full)	Full Third Normal Form (3NF) No redundant data. Each non-key column depends only on the primary key. Separate tables linked by foreign keys. categories <table><tr><th>id PK</th><th>name</th><th>slug</th></tr><tr><td>1</td><td>Electronics</td><td>electronics</td></tr><tr><td>2</td><td>Clothing</td><td>clothing</td></tr><tr><td>3</td><td>Books</td><td>books</td></tr></table> products <table><tr><th>id PK</th><th>category_id FK</th><th>name</th><th>price</th></tr><tr><td>1</td><td>1</td><td>Wireless Headphones</td><td>49.99</td></tr><tr><td>2</td><td>1</td><td>USB-C Cable</td><td>9.99</td></tr><tr><td>3</td><td>2</td><td>Cotton T-Shirt</td><td>19.50</td></tr><tr><td>4</td><td>3</td><td>SQL Handbook</td><td>34.00</td></tr></table> customers <table><tr><th>id PK</th><th>name</th><th>email</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td></tr><tr><td>2</td><td>Bob Jones</td><td>bob@mail.com</td></tr></table> orders <table><tr><th>id PK</th><th>customer_id FK</th><th>created_at</th></tr><tr><td>1</td><td>1</td><td>2026-04-01 10:30</td></tr><tr><td>2</td><td>2</td><td>2026-04-02 14:15</td></tr></table> order_items <table><tr><th>id PK</th><th>order_id FK</th><th>product_id FK</th><th>quantity</th><th>unit_price</th></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>49.99</td></tr><tr><td>2</td><td>1</td><td>3</td><td>2</td><td>19.50</td></tr><tr><td>3</td><td>2</td><td>4</td><td>1</td><td>34.00</td></tr></table> <tr><td rowspan="2"></td><td>2</td><td>Normalized with third normal form (partial)</td><td> Partial Third Normal Form (BNF) Mostly normalized — orders/order_items separated, but category embedded in products and product data duplicated in order_items. products A No separate categories table — category stored as strings <table><tr><th>id PK</th><th>name</th><th>price</th><th>category_name</th><th>category_slug</th></tr><tr><td>1</td><td>Wireless Headphones</td><td>49.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>2</td><td>USB-C Cable</td><td>9.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>3</td><td>Cotton T-Shirt</td><td>19.50</td><td>Clothing</td><td>clothing</td></tr><tr><td>4</td><td>SQL Handbook</td><td>34.00</td><td>Books</td><td>books</td></tr></table> customers <table><tr><th>id PK</th><th>name</th><th>email</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td></tr><tr><td>2</td><td>Bob Jones</td><td>bob@mail.com</td></tr></table> orders <table><tr><th>id PK</th><th>customer_id FK</th><th>created_at</th></tr><tr><td>1</td><td>1</td><td>2026-04-01 10:30</td></tr><tr><td>2</td><td>2</td><td>2026-04-02 14:15</td></tr></table> order_items A product name and product price duplicated from products table <table><tr><th>id PK</th><th>order_id FK</th><th>product_id FK</th><th>quantity</th><th>product_name</th><th>product_price</th></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>Wireless Headphones</td><td>49.99</td></tr><tr><td>2</td><td>1</td><td>3</td><td>2</td><td>Cotton T-Shirt</td><td>19.50</td></tr><tr><td>3</td><td>2</td><td>4</td><td>1</td><td>SQL Handbook</td><td>34.00</td></tr></table> </td></tr>	id PK	name	slug	1	Electronics	electronics	2	Clothing	clothing	3	Books	books	id PK	category_id FK	name	price	1	1	Wireless Headphones	49.99	2	1	USB-C Cable	9.99	3	2	Cotton T-Shirt	19.50	4	3	SQL Handbook	34.00	id PK	name	email	1	Alice Smith	alice@mail.com	2	Bob Jones	bob@mail.com	id PK	customer_id FK	created_at	1	1	2026-04-01 10:30	2	2	2026-04-02 14:15	id PK	order_id FK	product_id FK	quantity	unit_price	1	1	1	1	49.99	2	1	3	2	19.50	3	2	4	1	34.00		2	Normalized with third normal form (partial)	Partial Third Normal Form (BNF) Mostly normalized — orders/order_items separated, but category embedded in products and product data duplicated in order_items. products A No separate categories table — category stored as strings <table><tr><th>id PK</th><th>name</th><th>price</th><th>category_name</th><th>category_slug</th></tr><tr><td>1</td><td>Wireless Headphones</td><td>49.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>2</td><td>USB-C Cable</td><td>9.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>3</td><td>Cotton T-Shirt</td><td>19.50</td><td>Clothing</td><td>clothing</td></tr><tr><td>4</td><td>SQL Handbook</td><td>34.00</td><td>Books</td><td>books</td></tr></table> customers <table><tr><th>id PK</th><th>name</th><th>email</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td></tr><tr><td>2</td><td>Bob Jones</td><td>bob@mail.com</td></tr></table> orders <table><tr><th>id PK</th><th>customer_id FK</th><th>created_at</th></tr><tr><td>1</td><td>1</td><td>2026-04-01 10:30</td></tr><tr><td>2</td><td>2</td><td>2026-04-02 14:15</td></tr></table> order_items A product name and product price duplicated from products table <table><tr><th>id PK</th><th>order_id FK</th><th>product_id FK</th><th>quantity</th><th>product_name</th><th>product_price</th></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>Wireless Headphones</td><td>49.99</td></tr><tr><td>2</td><td>1</td><td>3</td><td>2</td><td>Cotton T-Shirt</td><td>19.50</td></tr><tr><td>3</td><td>2</td><td>4</td><td>1</td><td>SQL Handbook</td><td>34.00</td></tr></table>	id PK	name	price	category_name	category_slug	1	Wireless Headphones	49.99	Electronics	electronics	2	USB-C Cable	9.99	Electronics	electronics	3	Cotton T-Shirt	19.50	Clothing	clothing	4	SQL Handbook	34.00	Books	books	id PK	name	email	1	Alice Smith	alice@mail.com	2	Bob Jones	bob@mail.com	id PK	customer_id FK	created_at	1	1	2026-04-01 10:30	2	2	2026-04-02 14:15	id PK	order_id FK	product_id FK	quantity	product_name	product_price	1	1	1	1	Wireless Headphones	49.99	2	1	3	2	Cotton T-Shirt	19.50	3	2	4	1	SQL Handbook	34.00
	id PK	name	slug																																																																																																																																													
1	Electronics	electronics																																																																																																																																														
2	Clothing	clothing																																																																																																																																														
3	Books	books																																																																																																																																														
id PK	category_id FK	name	price																																																																																																																																													
1	1	Wireless Headphones	49.99																																																																																																																																													
2	1	USB-C Cable	9.99																																																																																																																																													
3	2	Cotton T-Shirt	19.50																																																																																																																																													
4	3	SQL Handbook	34.00																																																																																																																																													
id PK	name	email																																																																																																																																														
1	Alice Smith	alice@mail.com																																																																																																																																														
2	Bob Jones	bob@mail.com																																																																																																																																														
id PK	customer_id FK	created_at																																																																																																																																														
1	1	2026-04-01 10:30																																																																																																																																														
2	2	2026-04-02 14:15																																																																																																																																														
id PK	order_id FK	product_id FK	quantity	unit_price																																																																																																																																												
1	1	1	1	49.99																																																																																																																																												
2	1	3	2	19.50																																																																																																																																												
3	2	4	1	34.00																																																																																																																																												
	2	Normalized with third normal form (partial)	Partial Third Normal Form (BNF) Mostly normalized — orders/order_items separated, but category embedded in products and product data duplicated in order_items. products A No separate categories table — category stored as strings <table><tr><th>id PK</th><th>name</th><th>price</th><th>category_name</th><th>category_slug</th></tr><tr><td>1</td><td>Wireless Headphones</td><td>49.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>2</td><td>USB-C Cable</td><td>9.99</td><td>Electronics</td><td>electronics</td></tr><tr><td>3</td><td>Cotton T-Shirt</td><td>19.50</td><td>Clothing</td><td>clothing</td></tr><tr><td>4</td><td>SQL Handbook</td><td>34.00</td><td>Books</td><td>books</td></tr></table> customers <table><tr><th>id PK</th><th>name</th><th>email</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td></tr><tr><td>2</td><td>Bob Jones</td><td>bob@mail.com</td></tr></table> orders <table><tr><th>id PK</th><th>customer_id FK</th><th>created_at</th></tr><tr><td>1</td><td>1</td><td>2026-04-01 10:30</td></tr><tr><td>2</td><td>2</td><td>2026-04-02 14:15</td></tr></table> order_items A product name and product price duplicated from products table <table><tr><th>id PK</th><th>order_id FK</th><th>product_id FK</th><th>quantity</th><th>product_name</th><th>product_price</th></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>Wireless Headphones</td><td>49.99</td></tr><tr><td>2</td><td>1</td><td>3</td><td>2</td><td>Cotton T-Shirt</td><td>19.50</td></tr><tr><td>3</td><td>2</td><td>4</td><td>1</td><td>SQL Handbook</td><td>34.00</td></tr></table>	id PK	name	price	category_name	category_slug	1	Wireless Headphones	49.99	Electronics	electronics	2	USB-C Cable	9.99	Electronics	electronics	3	Cotton T-Shirt	19.50	Clothing	clothing	4	SQL Handbook	34.00	Books	books	id PK	name	email	1	Alice Smith	alice@mail.com	2	Bob Jones	bob@mail.com	id PK	customer_id FK	created_at	1	1	2026-04-01 10:30	2	2	2026-04-02 14:15	id PK	order_id FK	product_id FK	quantity	product_name	product_price	1	1	1	1	Wireless Headphones	49.99	2	1	3	2	Cotton T-Shirt	19.50	3	2	4	1	SQL Handbook	34.00																																																																										
	id PK	name	price	category_name	category_slug																																																																																																																																											
1	Wireless Headphones	49.99	Electronics	electronics																																																																																																																																												
2	USB-C Cable	9.99	Electronics	electronics																																																																																																																																												
3	Cotton T-Shirt	19.50	Clothing	clothing																																																																																																																																												
4	SQL Handbook	34.00	Books	books																																																																																																																																												
id PK	name	email																																																																																																																																														
1	Alice Smith	alice@mail.com																																																																																																																																														
2	Bob Jones	bob@mail.com																																																																																																																																														
id PK	customer_id FK	created_at																																																																																																																																														
1	1	2026-04-01 10:30																																																																																																																																														
2	2	2026-04-02 14:15																																																																																																																																														
id PK	order_id FK	product_id FK	quantity	product_name	product_price																																																																																																																																											
1	1	1	1	Wireless Headphones	49.99																																																																																																																																											
2	1	3	2	Cotton T-Shirt	19.50																																																																																																																																											
3	2	4	1	SQL Handbook	34.00																																																																																																																																											

1	Normalized with second normal form	Second Normal Form (2NF) No repeating groups, but transitive dependencies everywhere. No customers table, no categories table, no order_items table. products ⚠ Category data embedded — transitive dependency on category, not product <table><tr><th>id PK</th><th>name</th><th>price</th><th>category_name</th><th>category_slug</th><th>category_desc</th></tr><tr><td>1</td><td>Wireless Headphones</td><td>49.99</td><td>Electronics</td><td>electronics</td><td>Gadgets and devices</td></tr><tr><td>2</td><td>USB-C Cable</td><td>9.99</td><td>Electronics</td><td>electronics</td><td>Gadgets and devices</td></tr><tr><td>3</td><td>Cotton T-Shirt</td><td>19.50</td><td>Clothing</td><td>clothing</td><td>Apparel and fashion</td></tr><tr><td>4</td><td>SQL Handbook</td><td>34.00</td><td>Books</td><td>books</td><td>Reading material</td></tr></table> orders ⚠ No customers table — customer data repeated every row. Only 1 product per order row. <table><tr><th>id PK</th><th>customer_name</th><th>customer_email</th><th>product_id</th><th>product_name</th><th>product_price</th><th>qty</th><th>created_at</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td><td>1</td><td>Wireless Headphones</td><td>49.99</td><td>1</td><td>2026-04-01</td></tr><tr><td>2</td><td>Alice Smith</td><td>alice@mail.com</td><td>3</td><td>Cotton T-Shirt</td><td>19.50</td><td>2</td><td>2026-04-01</td></tr><tr><td>3</td><td>Bob Jones</td><td>bob@mail.com</td><td>4</td><td>SQL Handbook</td><td>34.00</td><td>1</td><td>2026-04-02</td></tr></table>	id PK	name	price	category_name	category_slug	category_desc	1	Wireless Headphones	49.99	Electronics	electronics	Gadgets and devices	2	USB-C Cable	9.99	Electronics	electronics	Gadgets and devices	3	Cotton T-Shirt	19.50	Clothing	clothing	Apparel and fashion	4	SQL Handbook	34.00	Books	books	Reading material	id PK	customer_name	customer_email	product_id	product_name	product_price	qty	created_at	1	Alice Smith	alice@mail.com	1	Wireless Headphones	49.99	1	2026-04-01	2	Alice Smith	alice@mail.com	3	Cotton T-Shirt	19.50	2	2026-04-01	3	Bob Jones	bob@mail.com	4	SQL Handbook	34.00	1	2026-04-02			
id PK	name	price	category_name	category_slug	category_desc																																																														
1	Wireless Headphones	49.99	Electronics	electronics	Gadgets and devices																																																														
2	USB-C Cable	9.99	Electronics	electronics	Gadgets and devices																																																														
3	Cotton T-Shirt	19.50	Clothing	clothing	Apparel and fashion																																																														
4	SQL Handbook	34.00	Books	books	Reading material																																																														
id PK	customer_name	customer_email	product_id	product_name	product_price	qty	created_at																																																												
1	Alice Smith	alice@mail.com	1	Wireless Headphones	49.99	1	2026-04-01																																																												
2	Alice Smith	alice@mail.com	3	Cotton T-Shirt	19.50	2	2026-04-01																																																												
3	Bob Jones	bob@mail.com	4	SQL Handbook	34.00	1	2026-04-02																																																												
0	Not normalized, a lot of redundant data/fields	Not normalized, massive redundancy One single table. Everything duplicated. Customer, product, category, and order data all in every row. shop_data ⚠ Single flat table — all data repeated in every row <table><tr><th>id</th><th>customer_name</th><th>customer_email</th><th>customer_phone</th><th>product_name</th><th>product_price</th><th>product_desc</th><th>category_name</th><th>category_slug</th><th>category_desc</th><th>qty</th><th>order_date</th><th>order_total</th></tr><tr><td>1</td><td>Alice Smith</td><td>alice@mail.com</td><td>07700 100200</td><td>Wireless Headphones</td><td>49.99</td><td>Bluetooth over-ear</td><td>Electronics</td><td>electronics</td><td>Gadgets and devices</td><td>1</td><td>2026-04-01</td><td>49.99</td></tr><tr><td>2</td><td>Alice Smith</td><td>alice@mail.com</td><td>07700 100200</td><td>Cotton T-Shirt</td><td>19.50</td><td>100% organic cotton</td><td>Clothing</td><td>clothing</td><td>Apparel and fashion</td><td>2</td><td>2026-04-01</td><td>39.00</td></tr><tr><td>3</td><td>Bob Jones</td><td>bob@mail.com</td><td>07700 300400</td><td>SQL Handbook</td><td>34.00</td><td>Learn SQL basics</td><td>Books</td><td>books</td><td>Reading material</td><td>1</td><td>2026-04-02</td><td>34.00</td></tr><tr><td>4</td><td>Alice Smith</td><td>alice@mail.com</td><td>07700 100200</td><td>Wireless Headphones</td><td>49.99</td><td>Bluetooth over-ear</td><td>Electronics</td><td>electronics</td><td>Gadgets and devices</td><td>1</td><td>2026-04-03</td><td>49.99</td></tr></table>	id	customer_name	customer_email	customer_phone	product_name	product_price	product_desc	category_name	category_slug	category_desc	qty	order_date	order_total	1	Alice Smith	alice@mail.com	07700 100200	Wireless Headphones	49.99	Bluetooth over-ear	Electronics	electronics	Gadgets and devices	1	2026-04-01	49.99	2	Alice Smith	alice@mail.com	07700 100200	Cotton T-Shirt	19.50	100% organic cotton	Clothing	clothing	Apparel and fashion	2	2026-04-01	39.00	3	Bob Jones	bob@mail.com	07700 300400	SQL Handbook	34.00	Learn SQL basics	Books	books	Reading material	1	2026-04-02	34.00	4	Alice Smith	alice@mail.com	07700 100200	Wireless Headphones	49.99	Bluetooth over-ear	Electronics	electronics	Gadgets and devices	1	2026-04-03	49.99
id	customer_name	customer_email	customer_phone	product_name	product_price	product_desc	category_name	category_slug	category_desc	qty	order_date	order_total																																																							
1	Alice Smith	alice@mail.com	07700 100200	Wireless Headphones	49.99	Bluetooth over-ear	Electronics	electronics	Gadgets and devices	1	2026-04-01	49.99																																																							
2	Alice Smith	alice@mail.com	07700 100200	Cotton T-Shirt	19.50	100% organic cotton	Clothing	clothing	Apparel and fashion	2	2026-04-01	39.00																																																							
3	Bob Jones	bob@mail.com	07700 300400	SQL Handbook	34.00	Learn SQL basics	Books	books	Reading material	1	2026-04-02	34.00																																																							
4	Alice Smith	alice@mail.com	07700 100200	Wireless Headphones	49.99	Bluetooth over-ear	Electronics	electronics	Gadgets and devices	1	2026-04-03	49.99																																																							

Aspect – PHP code is easy to maintain

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
5	3	Files and code are very well-organized, with meaningful names and detailed comments explaining functionalities.	The project is highly structured with consistent naming conventions. Each file and function is well-documented, making the code easy to understand and maintain. The code is modular and follows best practices.
	2	Files and code are well-organized, with meaningful names and some comments.	The project is neatly organized with clear file names and some comments. Most functionalities are explained, but some areas lack detail, making complex logic harder to understand.
	1	Files and code are separated and organized, making it easier to identify different parts.	The project has a basic structure, helping to locate code sections. However, there are no comments to explain the code, and naming conventions may be inconsistent.
	0	Files and code are unorganized, with no comments and code mixed together.	The project lack's structure, making it difficult to understand or maintain. Code readability is poor, with no comments to explain functionality.

Aspect – Backend code documentation and deployment instructions

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
5	3	Thorough documentation and comprehensive deployment instructions.	The project has extensive comments, a well-structured README file, and step-by-step deployment instructions, making it easy to understand and deploy the application.
	2	Good documentation with clear deployment instructions.	The project includes meaningful comments, a detailed README file, and clear deployment steps, making the code mostly understandable and deployable.
	1	Minimal documentation and basic deployment instructions are provided.	The project has a few comments and a basic README file with some deployment steps, but the information is incomplete and lacks detail.
	0	No documentation or deployment instructions are provided.	There are no comments, README files, or deployment steps, making the code difficult to understand and deploy.

Aspect – Database column type is reasonable defined

WSOS as per TD	SCORE	Judgement Score Description	Example and comments
5	3	Columns are in their related types. And the length of each type matches the use case. Status columns are easy to understand and maintained. Including straightforward column value, or with comments.	<pre>-- Correct types, proper lengths, clear status columns with comments CREATE TABLE products (id INT UNSIGNED AUTO_INCREMENT PRIMARY KEY, name VARCHAR(150) NOT NULL, description TEXT, price DECIMAL(10,2) NOT NULL, -- precise money, no float rounding stock_quantity SMALLINT UNSIGNED DEFAULT 0, weight_kg FLOAT(5,2), is_active BOOLEAN DEFAULT TRUE, -- clear boolean flag status ENUM('draft','published','archived') DEFAULT 'draft', -- self-documenting metadata JSON, created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP, updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP);</pre>

	2	Columns are in their related types. For example, int, float, text, Boolean, JSON. And are in proper length.	<pre>-- Related types used, proper lengths, but some suboptimal choices CREATE TABLE products (id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(255) NOT NULL, description TEXT, price FLOAT NOT NULL, -- should be DECIMAL for money stock_quantity INT DEFAULT 0, -- INT works but oversized for stock weight_kg FLOAT, is_active TINYINT(1) DEFAULT 1, -- works but not explicit BOOLEAN status VARCHAR(20) DEFAULT 'draft', -- no constraint like ENUM metadata JSON, created_at DATETIME, updated_at DATETIME);</pre>
	1	Columns are basically in their related types. But numbers for int/float may not be optimized for operation.	<pre>-- Basically related types, but numbers not optimized, magic values CREATE TABLE products (id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(255), description VARCHAR(255), -- should be TEXT for long content price INT NOT NULL, -- cents? pounds? loses decimals stock_quantity BIGINT DEFAULT 0, -- BIGINT for stock is wasteful weight_kg INT, -- loses decimal precision is_active INT DEFAULT 1, -- INT for a boolean flag status INT DEFAULT 0, -- magic number: 0=? 1=? 2=? metadata TEXT, -- TEXT instead of JSON created_at VARCHAR(50), -- string instead of TIMESTAMP updated_at VARCHAR(50) -- string instead of TIMESTAMP);</pre>

	0	All columns use string type or text type	<pre>-- All columns use TEXT -- no type differentiation at all CREATE TABLE products (id TEXT, -- not auto-increment, not integer name TEXT, description TEXT, price TEXT, -- "19.99" stored as string stock_quantity TEXT, -- "42" stored as string weight_kg TEXT, is_active TEXT, -- "yes" / "no" as text status TEXT, metadata TEXT, created_at TEXT, -- "2026-04-02" as plain string updated_at TEXT);</pre>
--	---	--	--