

SET0801 2024-5 TR2 001
Web Technologies
Coursework One Report
Group 23

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1. Overview of the Group Website

Our group is developing a quiz-based website inspired by Sporcle and Duolingo. The website will allow users to play different types of quizzes, each implemented by a different team member. The goal is to provide an engaging and interactive user experience while maintaining a visually appealing and user-friendly design.

Quizzes will challenge users in various ways, for example there may be timed questions, fill-in-the-blank responses, and multiple-choice formats. The website will be designed with scalability in mind, allowing new quizzes to be easily added. In addition to the core quiz functionality, I will be responsible for implementing accessibility features to ensure the site is inclusive for all users.

2. Background Research & Inspiration

The inspiration for our site comes from Sporcle and Duolingo, which provides dynamic, interactive quizzes. We analyzed Sporcle and other quiz-based websites to identify features that enhance engagement, such as:

- **Live feedback** (correct/wrong answers shown instantly)
- **Timers** to add challenge
- **Score tracking** to encourage competition
- **Keyboard-based input support**
- **Progress bars** to keep user engagement

Accessibility Considerations

Accessibility is crucial for making the site usable by people with disabilities. Researching **WCAG 2.1 guidelines**, we found several key enhancements to implement:

- **Keyboard navigation** for users who cannot use a mouse
- **Screen reader support** using ARIA attributes
- **High-contrast mode** for users with vision impairments
- **Adjustable text size** to improve readability

3. Features & Individual Responsibilities

Each group member will develop a different category(topic) under the theme of video gaming with four quizzes(content) each. At this time I do not have specific details on what the other group members are planning on doing, despite this, we will be working on:

Feature	Description	Responsible Member
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Multiple-choice quiz	Users select an answer from four options	Still to be determined
Fill-in-the-blank	Users type answers into a text box	Still to be determined
Timed quiz	Users must answer as many questions as possible before time runs out	Still to be determined
True/False quiz	Users select "True" or "False" answers	Still to be determined
Match answers to corresponding options	Users will select an option and attach it to another option if they correspond or match then it is correct	Still to be determined
Slider based	The user will use a slider to answer a question for example if they are asked to show what year a console was released they would slide the slider to the year they think the answer is.	Still to be determined
Provide as many answers as possible	The user will type as many answers as they can with in the time limit shown on display	Still to be determined
Accessibility Features	Ensuring screen-reader compatibility, keyboard navigation, and visual accessibility options	Myself
Random Quiz	When this event is triggered to user will be directed to a random quiz within a random category, future releases of this feature may allow the user to filter through chosen quizzes.	Myself
Componentization of site development	I will lead the development and create the components of the website that will procedurally loaded via JS so that there is consistency throughout the website	Myself
sidebar	Once in a quiz the nav bar will not be visible so the page is less cluttered and the user can focus on the quiz so a side bar will be shown to maintain access to the rest of the site	Myself

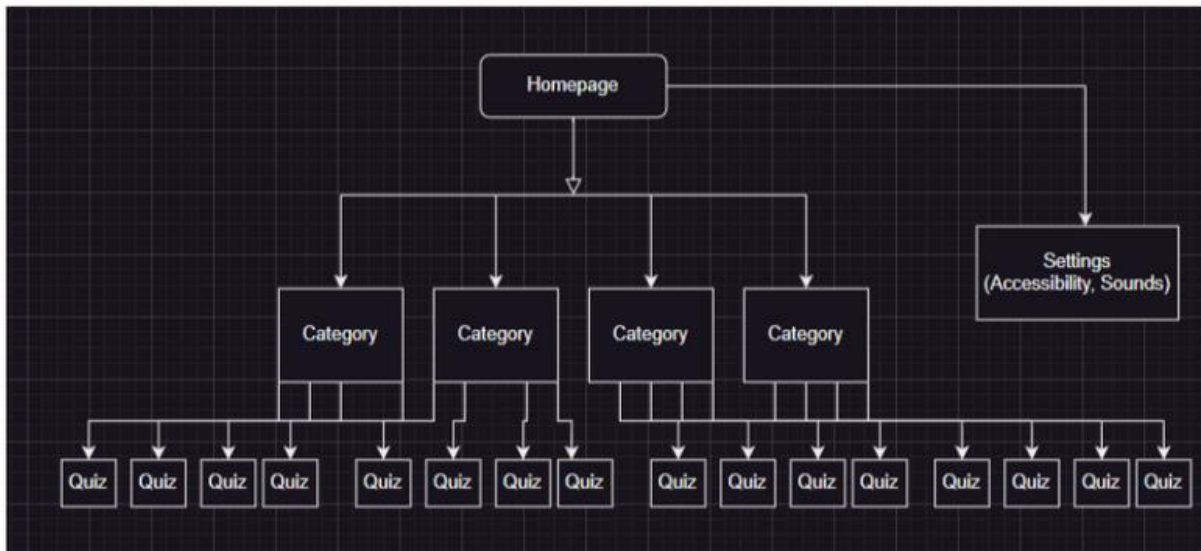
4. Site Organization & Navigation

Our website will have a **simple, intuitive structure**. Users will start on a **homepage** where they can choose a category and quiz. Each quiz will have its own page, and users can navigate between quizzes easily.

Navigation Flow:

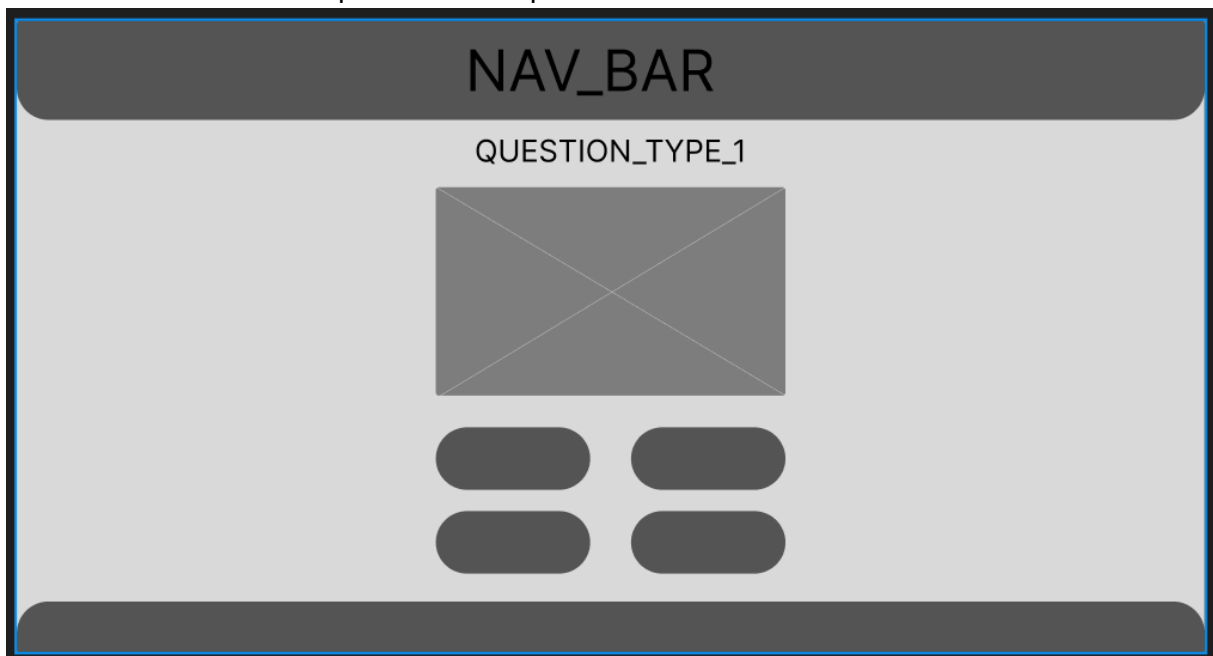
1. Homepage → Quiz Selection Page
2. Quiz Page → Start Quiz
3. Quiz Completion → Score Display → Option to Retry or Return Home

Diagram:

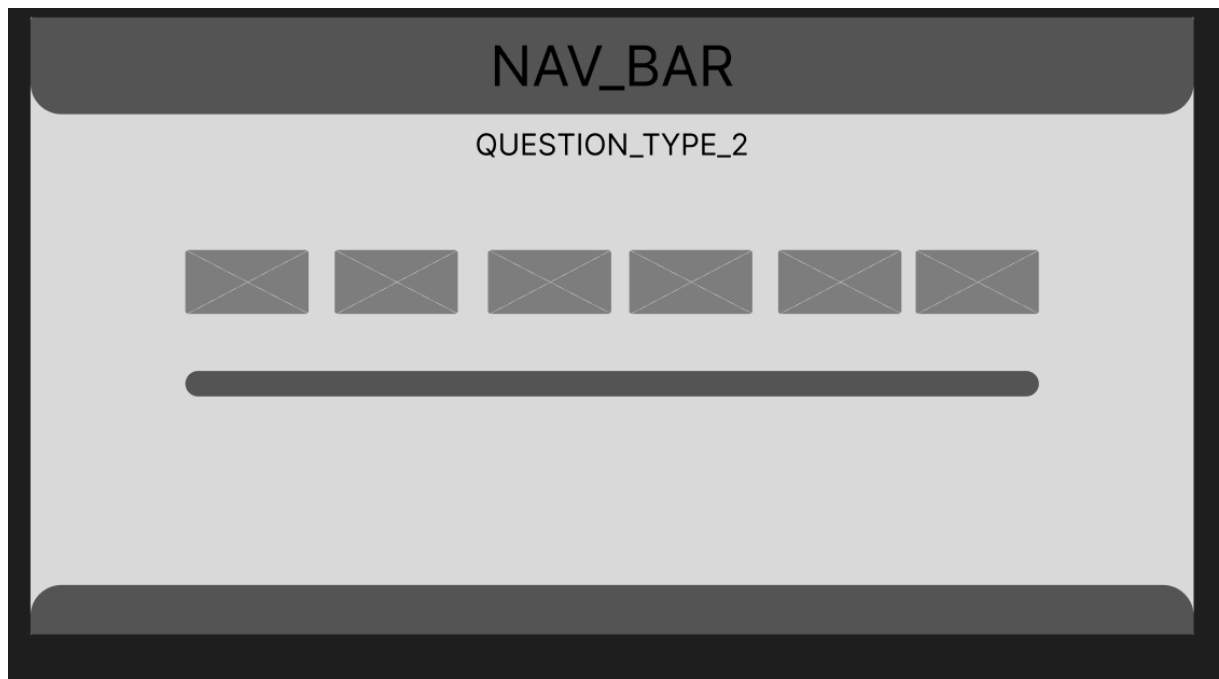


5. Wireframe & UI Design

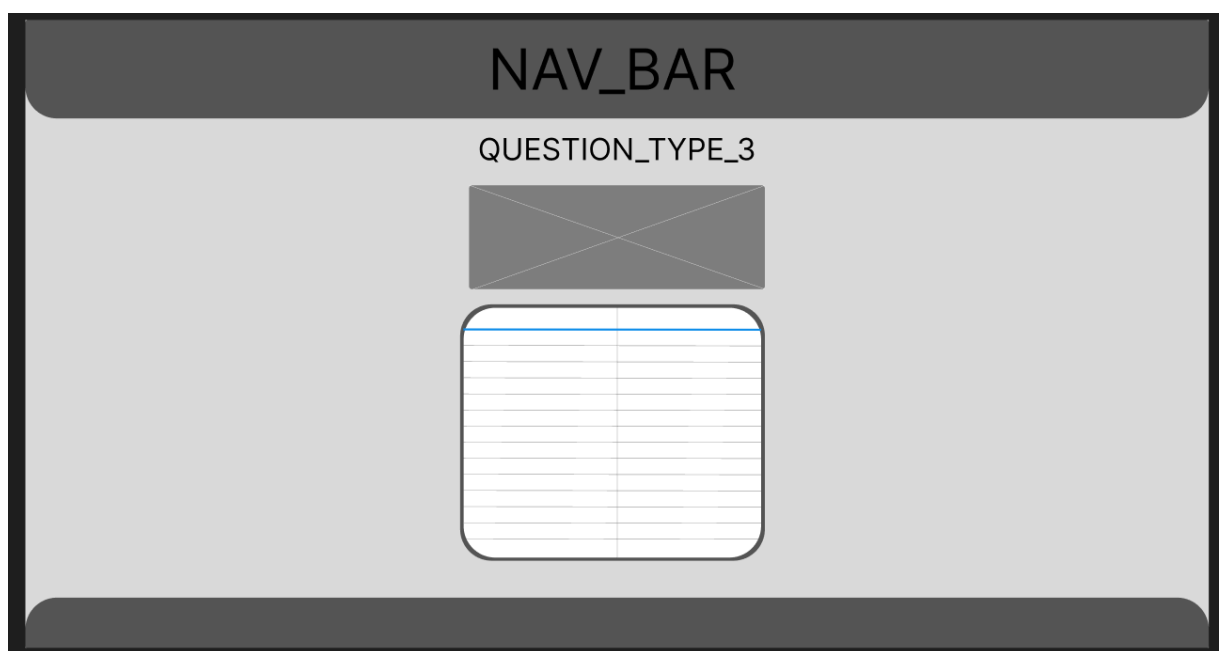
To ensure a consistent experience across different quizzes, we will design a **unified layout**, below are wireframe templates for the quizzes:



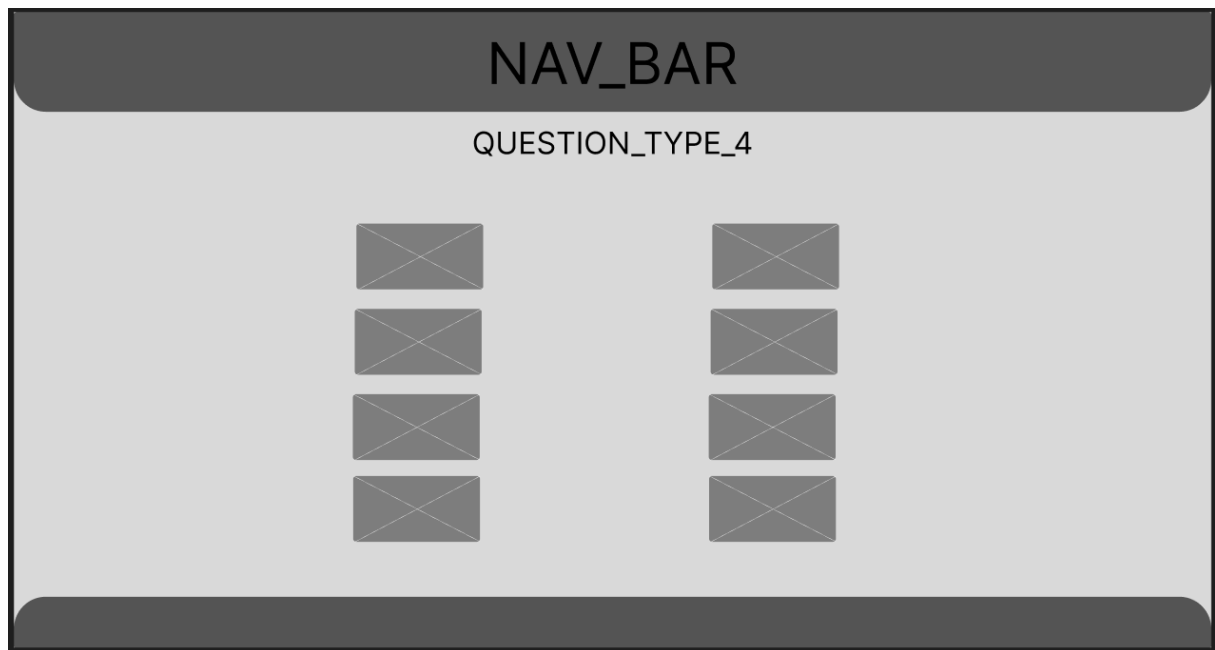
^this is the first iteration of the multi choice question type



^this is the first iteration of the slider question type



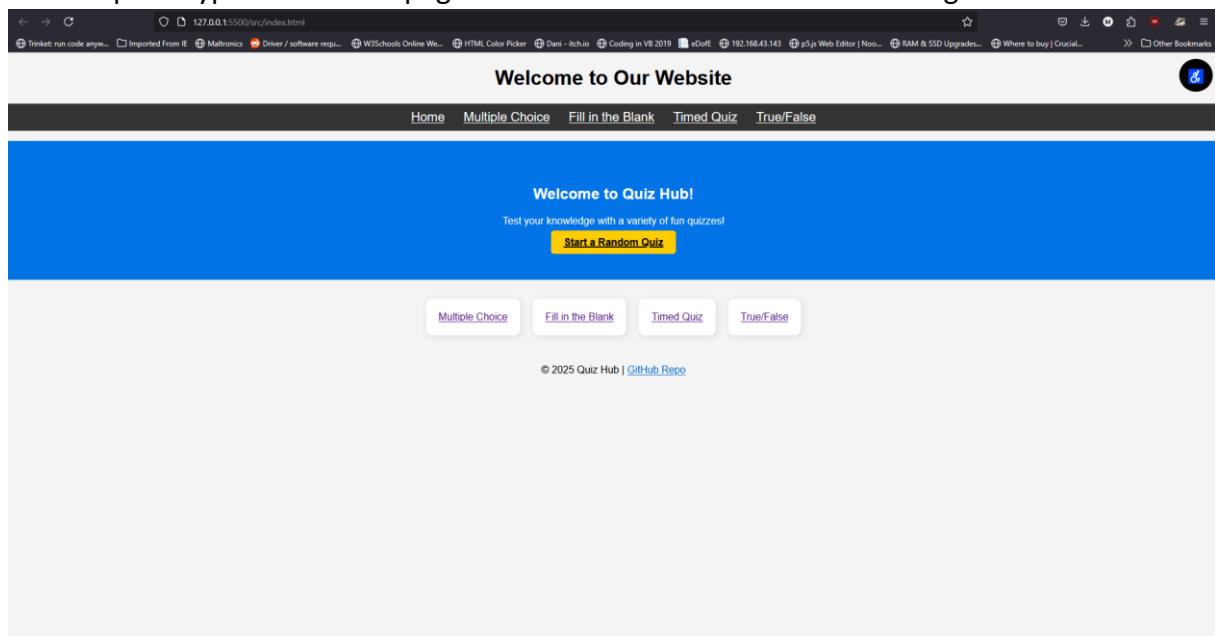
^this is the first iteration of the timed enter as many answers as you can question type



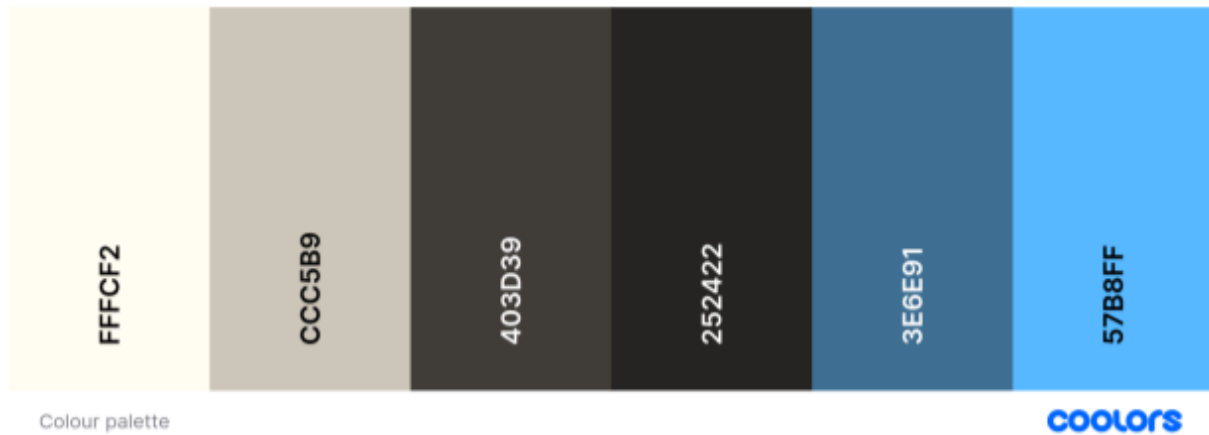
^this is the first iteration of the match corresponding answers question type

These are all the wireframes I've been able to get a hold of as I have been facing heavy technical issues.

this is a prototype index homepage that I've made for somewhere to begin:



The group has generally decided to use this colour palette:



This features two lighter colours to use on a light mode format and two darker to use for a dark mode, these are complimented by two shades of blue which is a common colour within the gaming theme and allows for a vibrant pop in the websites design, We have also discussed adding a yellow into the mix for extra vibrance but haven't got around to testing it. These colours should lead us to have good colour separation and depth within the website and easily break up the sections whilst drawing attention to key parts of the page with the vibrant blues.

6. Project Plan & Timeline

To manage development efficiently, we will use a **RAD (Rapid Application Development) approach**. Our project is split into sprints to ensure steady progress.

Week	Task
Week 1	Brainstorming & planning, wireframing
Week 2	Setting up GitHub repo, initial HTML/CSS structure
Week 3-4	Individual feature development (quizzes + accessibility)
Week 5	Integration and testing
Week 6	User feedback and accessibility refinements
Week 7	Final deployment & report writing

My **personal milestones** focus on integrating accessibility into all quiz pages early, followed by usability testing to refine features.

7. Additional Features & Future Enhancements

Beyond the core accessibility features, possible **enhancements** include:

- **Text-to-speech functionality** for questions and answers.
- **Dark mode toggle** for user preference.
- **User profiles** to track scores and history.

Conclusion

This project aims to balance **engagement and inclusivity**, making quizzes fun for a broad audience. By incorporating **well-designed accessibility features**, we ensure that users of all abilities can enjoy the site. Our structured approach and timeline will keep development on track while allowing flexibility for improvements.

References

<https://www.duolingo.com/learn>

<https://www.sporcle.com/type/>

<https://coolors.co/fffcf2-ccc5b9-403d39-252422-3e6e91-57b8ff>