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Assignment 6

Milestone list

- Research and select a cloud solution for the database and other necessary services.
- Design the overall look and feel, including the color palette, UI components, and complete user interface
- Create the database schema and the WebSocket schema/protocol.
- Develop a functional 1v1 demo to test and validate core functionality.
- Test the full functionality of the application, checking for bugs, performance issues, and user-friendliness.
- Deploy the application online for public use.

Table 1: Timeline

Task and Milestone	Start Date	Completion Date
Create the official logo and establish the primary color palette for the application. (Assigned: Henock, Aidan, Rukudzo)	October 6	April 1st
Create the layout and user navigation flow for the main landing page. (Assigned: Rukudzo)	October 6	October 31
Design the user interface for the live online multiplayer competition screen. (Assigned: Aidan, Henock, Rukudzo)	October 6	October 31
Research and decide on the component and icon libraries for building the user interface. (Assigned: Henock)	October 8	October 12

Research and choose an online IDE dependency to allow users to write code in the browser. (Assigned: Henock)	September 1	September 30th
Determine which programming languages will be supported and identify the necessary compilers and interpreters. (Assigned: Rukudzo)	September 16th	October 1st
Choose the database technology (e.g., SQL, NoSQL), the specific database management system, and the hosting solution. (Assigned: Rukudzo, Aidan)	September 1st	October 1st
Decide on the backend technology stack and overall architecture. (Assigned: Rukudzo)	September 1st	January 1st
Research and choose a WebSocket dependency to handle live data transfer between users during multiplayer matches. (Assigned: Henock)	November 1st	January 1st
Research and decide on a dependency or service for secure user sign-on and verification. (Assigned: Aidan)	November 1st	January 1st
Research and define a solution for running the server inside a Docker container. (Assigned: Henock, Rukudzo)	October 1st	October 31st
Identify and list all necessary UI components required for the project based on the design layouts. (Assigned: Henock, Rukudzo, Aidan)	September 1st	January 1st
Research and define the	November 1st	January 1st

functionality for multiplayer mode, including the ranking system and scoring logic. (Assigned: Aidan)		
Create a UML diagram to visually construct the database structure and relationships. (Assigned: Aidan)	November 1st	January 1st
Build the database tables and structure according to the finalized UML diagram. (Assigned: Aidan, Rukudzo)	November 1st	January 1st
Determine the strategy and solution for data transfer between the client and the server. (Assigned: Henock, Aidan)	November 1st	January 1st
Research and select a cloud solution for the database and other necessary services.	October 6th	October 12th
Design the overall look and feel, including the color palette, UI components, and complete user interface	October 18th	January 1st
Create the database schema and the WebSocket schema/protocol.	November 1st	January 1st
Develop a functional 1v1 demo to test and validate core functionality.	October 1st	January 1st
Test the full functionality of the application, checking for bugs, performance issues, and user-friendliness	October 1st	April 1st
Deploy the application online for public use.	January 1st	March 1st

Table 2: Effort matrix

Task and Milestone	Effort
Create the official logo and establish the primary color palette for the application. (Assigned: Henock, Aidan, Rukudzo)	Rukudzo 40%: Aidan:30% Henock: 30%
Create the layout and user navigation flow for the main landing page. (Assigned: Rukudzo)	Rukudzo 100%:
Create the layout and user navigation flow for the main landing page. (Assigned: Rukudzo)	Rukudzo 100%:
Design the user interface for the live online multiplayer competition screen. (Assigned: Aidan, Henock, Rukudzo)	Rukudzo 30%: Aidan:40% Henock: 30%
Research and decide on the component and icon libraries for building the user interface. (Assigned: Henock)	Henock: 100%
Research and choose an online IDE dependency to allow users to write code in the browser. (Assigned: Henock)	Henock: 100%
Determine which programming languages will be supported and identify the necessary compilers and interpreters. (Assigned: Rukudzo)	Rukudzo 100%:
Choose the database technology (e.g., SQL, NoSQL), the specific database management system, and the hosting solution. (Assigned: Rukudzo, Aidan)	Rukudzo 50%: Aidan:50%
Decide on the backend	Rukudzo 100%

technology stack and overall architecture. (Assigned: Rukudzo)	
Research and choose a WebSocket dependency to handle live data transfer between users during multiplayer matches. (Assigned: Henock)	Henock: 100%
Research and decide on a dependency or service for secure user sign-on and verification. (Assigned: Aidan)	Aidan:100%
Research and define a solution for running the server inside a Docker container. (Assigned: Henock, Rukudzo)	Rukudzo 50%: Henock: 50%
Identify and list all necessary UI components required for the project based on the design layouts. (Assigned: Henock, Rukudzo, Aidan)	Rukudzo 30%: Aidan:30% Henock: 40%
Research and define the functionality for multiplayer mode, including the ranking system and scoring logic. (Assigned: Aidan)	: Aidan:100%
Create a UML diagram to visually construct the database structure and relationships. (Assigned: Aidan)	: Aidan:100%
Build the database tables and structure according to the finalized UML diagram. (Assigned: Aidan, Rukudzo)	Rukudzo 50%: Aidan:50%
Determine the strategy and solution for data transfer between the client and the server. (Assigned: Henock, Aidan)	Aidan:50% Henock: 50%
Research and select a cloud solution for the database and other necessary services.	Henock: 34% Aidan: 33% Rukudzo 33%
Design the overall look and feel,	Henock: 20.7%

including the color palette, UI components, and complete user interface	Aidan: 9% Rukudzo 70.3%
Create the database schema and the WebSocket schema/protocol.	Henock: 67% Aidan: 18% Rukudzo: 15%
Develop a functional 1v1 demo to test and validate core functionality.	Henock: 10% Aidan: 60% Rukudzo 30%
Test the full functionality of the application, checking for bugs, performance issues, and user-friendliness	Henock: 30% Aidan: 30% Rukudzo: 40%
Deploy the application online for public use.	Henock: 30% Aidan: 70%