Project Milestone 2

Festive Haircut

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Project Management Tool - Google Sheets

[Link to Project Plan]

Project Features

- ➢ Gameplay: Move - Attack - Block
  - Functional
    - Move - 2D movement with jumping
    - Move - Basic punch for an attack
    - Blocking reduces damage taken
  - Non-Functional
    - Proper animations for each action
    - Functional hitboxes

- ➢ Customization: Character select - Control Select - Background Select
  - Functional:
    - Skins for now, different characters if complexity needed
    - Can change button inputs
    - Can change background map
  - Non-functional
    - Saves most common stage
    - Sprite change in game

- ➢ Account Management
  - Account Management
    - Functional Features
      - Create account
      - Login to account
      - Change display name
    - Nonfunctional Features
      - Adding accounts into database
      - Checking/confirming account information from database

- Database:
    - Row for each user
    - Columns:
        - Username (unique, primary key)
        - Display name
        - Password
        - Email
        - Key bindings
        - Wins
        - Losses

➢ Gameplay Backend: Damage - Health
- Functional:
    - Player can choose to heal
- Non - functional:
    - Current Health automatically calculated after damage is applied
    - Health Bar displaying current health

➢ Account Data: User Data - Stats - Controls
- Functional:
    - Logging in will fetch the data
- Non-Functional:
    - Stored data will be tied to a user's account
    - Stats: Username, Wins, Losses, Win-rate, Lowest Match Time

➢ UI/UX
- Functional:
    - Easy to navigate website
    - Simple menu
- Non-Functional
    - Background Music and Sounds Effects
        - 8 bit Rocky theme
        - 8 bit What is Love
        - 8 bit John Cena theme
    - Various other art assets
        - Character sprites
        - Background art

Documents

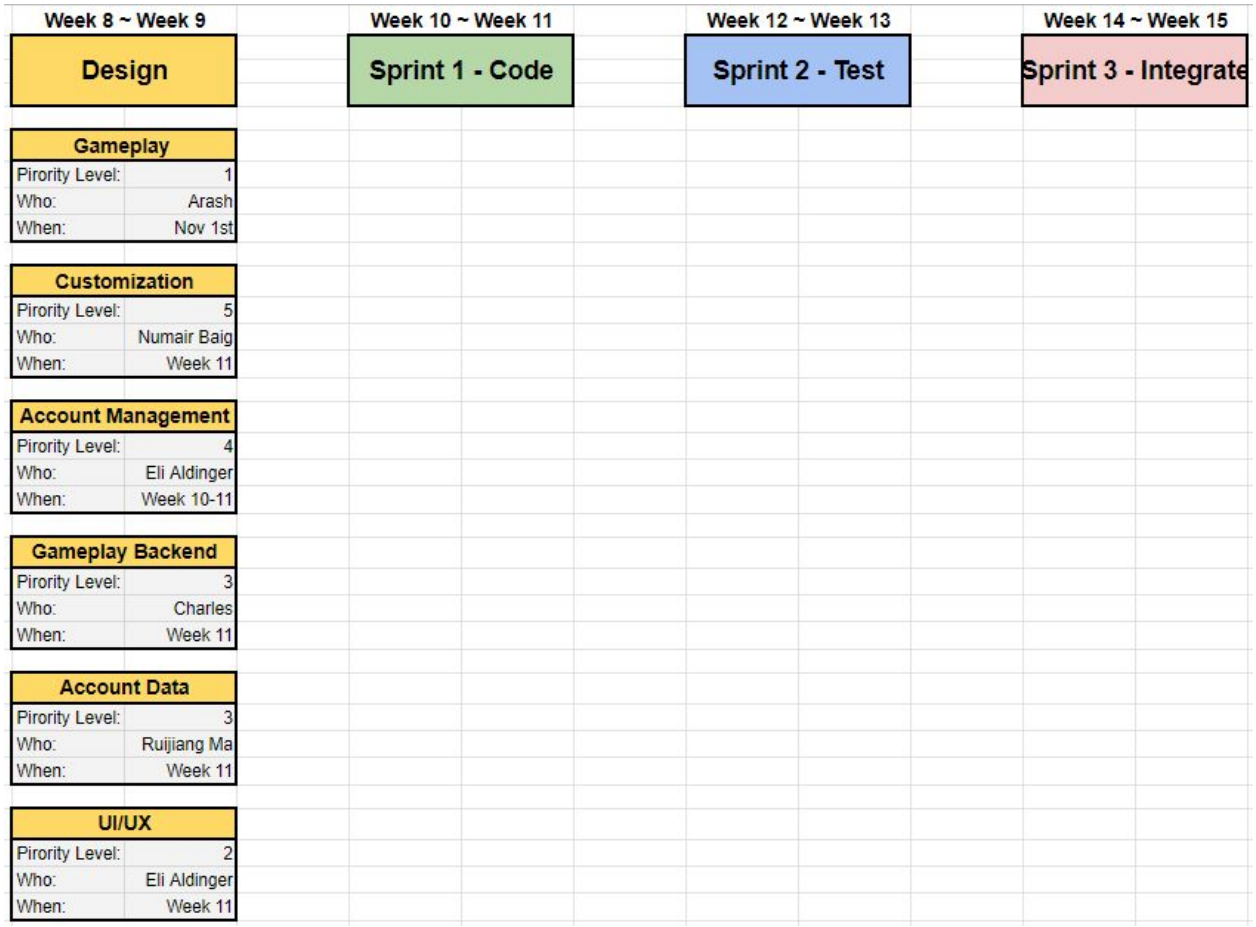
- **Gameplay - Move Attack Block**
    - The move, attack and block is essentially what makes the game a fighting game. Moving is functionally comprised of being able to move characters in a 2-D setting, including running or walking forward, backward, and jumping in either direction. Attacking, from a functional standpoint, would be punches and kicks controlled by pressing a button that is chosen by the players. Blocking would also be controlled by a single button, and would simply reduce the damage taken from potential hits. Non-functional aspects would include animating the fighters so that what the player intends for them to do is visible. The hitboxes of the characters would also be non-functional, as they wouldn't be controlled by the player. Instead, they would correspond to each individual action, with a bigger hitbox for kicks.
- **Customization**
    - The customization in the game will allow players to tailor different aspects of it to their tastes. Each of the functional aspects directly relates to the non-functional aspects, so both will be discussed at once. The first is both functional and non-functional, character selection. Before entering the game, the player will be asked to select their character sprite. Once they have chosen this, the game will automatically load their selected model. Another portion that is both functional and nonfunctional is stage selection. After selecting a character, the player will be prompted to select a stage. Choosing a stage will automatically change it in game. Furthermore, the game will remember a player's most commonly selected stage and mark it for them for their convenience. Lastly, the player will be able to change their controls, which will be saved to their profile. The keys associated with movement, attacking, and blocking will all be able to be remapped to other keys. This customization will make playing the game as comfortable for the players as possible.
- **Account Management**
    - Players will be able to create an account for the game that will store their basic information. Accounts will have a unique username upon creation and a password tied to it. Players will log in at the start of the game in order to play.

Their account will be used for the multiplayer aspect of the game. Connecting to other players will be done through user accounts. Accounts will also store information about the player in our database (recovery email, number of wins, number of losses). These accounts will be automatically stored in the website's database, with information being pushed and pulled from it as the user changes and requests it. The database will consist of a table with a row for each user that we have. The columns will include, a unique username as the primary key, a display name, the user's password, the user's email, any custom key bindings, and the total wins and losses.

- **Gameplay Backend**
    - With the gameplay backend, it will add the game aspects of health and damage to the characters in a fight. In a functional aspect, players will have the option to heal during a fight which adds an element of strategy for the players as they decide when to attack and when to heal. Healing would allow a player to take back some damage by giving them some amount of life points, but will not allow a player to go further than the max health. The non-functional aspects are displaying the health of the players on the screen and when a successful attack is made, have that damage subtract for the overall health from the player that got hit. Also, have it so attacks won't send an opponent's health to a negative number and end when it hits zero.
- **Account Data**
    - As players log in the game, the account data unit will begin to fetch data from the back-end database if their password successfully matches the corresponding username's password in the database. Then, the data fetched can be of each player's basic information when they create their account, or their win-loss history data if it is not their first time logging in, and the data needs to be calculated by the database base on other information stored. The back-end database also should be able to provide data creation, data entry, update, query and reporting functions to provide detailed data regarding player's game history and other relevant information. Hence, each player's account data should be stored individually in the database for fast processing.
- **UI/UX**
    - The user interface and the user experience for this project will be a small but important portion. The functional portion of the project will be comprised of two parts. The first will be the front end portion of the website. It will have a login page when you first arrive. Logging in will take you to the webpage with three buttons labeled "Play Now", "How to Play", and "Festive Haircut". The first will take you to a page with the game embedded into the webpage. The second will take you to a page with gifs demonstrating the basics of playing the game. The last will contain information about our team along with any other information that doesn't fall under the "How to Play" category such as an FAQ, contact information, etc. The information is consolidated in this manner to improve the user experience. The majority of the user's will come to our website only to play

our game, and by keeping all the information not related to this in one area it drastically improves the experience. The next functional portion is the game's menu. This will be comprised of two options, entering the game, and the settings screen. The settings screen will include changing controls and adjusting volume. Entering the game will take players to character and stage selection. See customization for more details on this portion. This game is meant to be simple and the menu design will reflect that choice as well.

- The non-functional aspects of the user experience is entirely comprised of the artistic assets we will be using, music, sprites, and the background. The music will cycle through with one song playing during the menu screen, another during the game, and the last will play during the post-game screen. These will be 8-bit remixes of the Rocky theme, What is Love, and the John Cena theme respectively. The character and game sprites will be preset depending on what is available for free online. However, one character sprite will be used with the rest being simple recolors of the original. Lastly the backgrounds will be 8-bit landscapes. Some ideas we have had for these are a street, the Windows XP "Hills" desktop background, and a traditional Japanese castle.



https://docs.google.com/spreadsheets/d/1zXOLjvIp3UAqbqtoqOQKcicg4IGdv5wpzJk_EqATA1k/edit?usp=sharing