**Document 1 – Requirements & Design**

This document is contained in your GitHub repository in a folder named *docs*.

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**Project Description: Battle to Evolve**

Game: Battle to Evolve

I want a game that allows me to create my own character and battle with other characters. When I first boot up the game it should allow me to create a new character or load characters I created in the past. In the character creator, I can adjust my character’s stats and give it a name, and it allows me to use more then just alphabets to name this character. If I so choose, I can make the game randomly choose my character’s stats. Once I’m finish, I can save my new character or delete it. I then can create a maximum team of 3 characters each with their own character portrait.

I begin the battle and I can see the HP bars of all characters on screen. I can also see the current round we are currently in. Battles will play out automatically and all battle information is displayed inside a text box. I adjust the speed of the battle if I can’t keep up. Me and my opponents will take turns attacking each other. Sometimes my team is the first to attack, sometimes we miss some attacks. This applies to my opponents as will.

When I win the battle, I am given the option of combining two of my characters into one with enhance stats. I can see these stats before I preform the fusion. I can then save this character and later see the ancestry history of this character (i.e. the characters used to create this character). When I enter the next battle, my opponent won’t be at a disadvantage after I preform fusion. In fact, their team’s new stats will help counteract the stat increase of my new character.

Before I retire from the game, I delete any characters I just created from preforming fusion because of the 12-character limit.

**User Story Summary**

[Provide a list of User Stories]

|  |  |
| --- | --- |
| **Num** | **Title** |
| 1 | ***Battle Rounds vs Health*** |
| 2 | ***Battle: Team Acting First*** |
| 3 | ***First Attack*** |
| 4 | ***Dodge*** |
| 5 | ***Automation*** |
| 6 | ***Battle Speed*** |
| 7 | ***Pause Battle*** |
| 8 | ***Surrender during Battle*** |
| 9 | ***Battle Graphics*** |
| 10 | ***Evolution*** |
| 11 | ***Evolution History*** |
| 12 | ***Balance*** |
| 13 | ***Evolution GUI*** |
| 14 | ***Character Creation*** |
| 15 | ***Character Creation Randomization*** |
| 16 | ***Character Deletion*** |
| 17 | ***Character Portrait*** |
| 18 | ***Character Saving*** |
| 19 | ***Character Loading*** |
| 20 | ***Character Naming*** |
| 21 | ***Evolved Character Naming*** |
| 22 | ***Battle Log*** |
| 23 | ***Multiple Attacks*** |
| 24 | ***Enemy portraits*** |
| 25 | ***Health Bar*** |

**User Story 1 – *Battle Rounds vs Health***

User Story

Battle Gameplay

Flow

As a user, I want to be able to have a battle that continues through multiple rounds until a character or teams health reaches zero so that I can keep track of battle progress.

System Requirements

A battle needs to keep track over how many times a character gets to attack (rounds) and the health of each character after a round.

If a character’s health falls to zero or below after a round, then the battle is over.

Notes

**User Story 2 – *Battle: Team Acting First***

User Story

Battle: Team Acting First

Flow

As a user, during a team battle, I don’t want my side or the opponent to be guaranteed to act first during each round in a battle.

System Requirements

A Teams speed along with other factors will determine who goes first.

Notes

**User Story 3 – *First Attack***

User Story

First Attack

Flow

As a user, I want to know which character will attack first so that I can adapt my character accordingly.

System Requirements

A character must have a speed variable saved as a character trait.

Notes

The character with the higher speed variable will get to attack first.

**User Story 4 – *Dodge***

User Story

Dodge

Flow

As a user, I want there to be a chance that my character (or the enemy character) can dodge an attack and suffer no damage so that a character with a low health may be able to survive longer.

System Requirements

A character must have a luck variable.

Notes

The character with the higher luck variable will have a creator chance at dodging an attack.

**User Story 5 – *Automation***

User Story

Automation

Flow

As a user, once a battle starts, I want to just watch the read outs and not to have to interact with the characters till after the battle so that I can just enjoy the battle.

System Requirements

Once a battle has begun it will continue with no interaction from the user.

Notes

**User Story 6 –** ***Battle Speed***

User Story

Battle Speed

Flow

As a user, I want the ability to change the battle speed.

System Requirements

User can use a slider/button to change the battle speed.

Notes

**User Story 7 – *Pause Battle***

User Story

Pause Battle

Flow

As a user, I want the ability to pause the battle so that I may return later.

System Requirements

The user can press a button that halts the battle until a resume button is pressed.

Notes

A new window could open with the main window blurred out once the paused button is pressed. This window will have a resume button.

**User Story 8 –** ***Surrender during Battle***

User Story

Surrender during Battle

Flow

As a user, I should be able to surrender if I believe I can’t win. My opponent would then be the victor.

System Requirements

The user can press a button that ends the game which makes the opponent’s team the victor.

Notes

A new window could open up that includes the surrender button.

**User Story 9 – *Battle Graphics***

User Story

Battle Graphics

Flow

As a user, I want to be able to see a read out of what happened each round and the enemy character and my characters health.

System Requirements

Battle GUI that displays messages about the battle and bars to show characters health.

Notes

Progress bars can be used as health bars.

**User Story 10 – *Evolution***

User Story

Evolution

Flow

After a battle, I want to be able to take my two strongest characters and evolve them into one single character of a higher level with grater abilities.

System Requirements

Allow user to select two characters to evolve at the cost of losing one character but for a single higher character

Notes

**User Story 11 – *Evolution History***

User Story

Evolution History

Flow

I want to see who the original characters were, or family tree, that lead to the development of my higher level character so I can better see what character lead to improvements.

System Requirements

Keep a history of a character’s “parent” characters and allow the user to see the genealogy of their characters evolution.

Notes

**User Story 12 – *Balance***

User Story

Balance

Flow

During a battle or looking for a battle, I do not want to battle an opponent with significantly higher character levels then mine, so that I do not have a chance of winning.

System Requirements

Implement some a balance system that maintains fairness in the battle so that one two does not have an unfair advantage.

Notes

**User Story 13 – *Evolution GUI***

User Story

Evolution GUI

Flow

When I choose two characters to evolve, I want to see what kind of statistics my new character can have after combining the two to help determine if it is worth evolving now.

System Requirements

In the evolve GUI list the range of statistics that the user has a chance of gaining.

Notes

**User Story 14 – *Character Creation***

User Story

Character Creation

Flow

As a user, I want to be able to create a character with my determined values so that I can use them in a battle.

System Requirements

Notes

**User Story 15 – *Character Creation Randomization***

User Story

Character Creation Randomization

Flow

As a user, I want to be able to create a character with random traits that I did not choose so that I can battle unknown characters.

System Requirements

Notes

**User Story 16 – *Character Deletion***

User Story

Character Deletion

Flow

As a user I want to be able to delete a character so that I do not have to have them in my character list anymore.

System Requirements

Notes

**User Story 17 – *Character Portrait***

User Story

Character Portrait

Flow

As a user I want to be able to draw a simple character picture so that I can see a visual representation of each of my characters.

System Requirements

Implement a canvas feature allowing a user to draw a picture to be used as a character portrait.

Notes

**User Story 18 – *Character Saving***

User Story

Character Saving

Flow

As a user I want to be able to save a character so that I can use it later.

System Requirements

Implement a saving function for a character.

Notes

**User Story 19 – *Character Loading***

User Story

Character Loading

Flow

As a user I want to be able to load a character that I created in the past.

System Requirements

Implement a loading function for all created characters.

**User Story 20 – *Character Naming***

User Story

Character Naming

Flow

As a user I want to be able to name my character for easy identification

System Requirements

Implement a saving name function for the player character.

Notes

**User Story 21 – *Evolved Character Naming***

User Story

Evolved Character

Flow

As a user I want my evolved character to retain its name and not generate a new one.

System Requirements

Implement a saving name function for the evolved player character.

**User Story 22 – *Battle Log***

User Story

Battle Log

Flow

As a user I want to know how much damage a character or enemy has taken/dealt.

System Requirements

Implement a output method that sends to a text area of who did what damage.

**User Story 23 – *Multiple Attacks***

User Story

Multiple Attacks

Flow

As a user I want a system where if you have enough stamina you can attack again.

System Requirements

Have a method that determines if you have enough stamina that you attack again.

**User Story 24 – *Enemy portraits***

User Story

Enemy portraits

Flow

As a user I want to see unique enemy designs when I am playing the game during battle.

System Requirements

Implement a method that displays a enemy portrait on enemies side.

**User Story 25 – *Health Bar***

User Story

Health Bar

Flow

As a user I want to have a visual representation as percentage of how much health the characters have.

System Requirements

Implement a method that displays a progress bar and decrease it whenever a character takes damage.

Notes

**Class Design**

