*Brief 02 Dance Off*

*Feature Specifications*

**Team Name**

Team Discovery Channel

[Teams:](#_v6kpy2ufpsc9)

[Battle System:](#_ront53ahjv0v)

[Character Name System:](#_4wvz6avcqn5h)

[Fight System:](#_wvmqiltdyx1)

[Stats System:](#_una9tr3suzd)

[Power System:](#_uyekj1trxz4y)

[Leveling System:](#_nf49ixrzwha2)

# Teams:

* We want to have two teams of characters
* Each team should be assigned a name i.e. the Avengers.
* They should then spawn in three characters per team.
* Once spawned in each should:
  + Have unique character names with different stats.
  + Once spawned in they should be:
    - Added to their team.
    - Removed from their team when dead.

# Battle System:

* Selects two characters from each team
  + It can be random, or it can be based on stats.
* While there are still fighters on each team, they keep selecting new characters.
  + Battle each other using the Battle System.
  + Once a round is over do some damage to the defeated.
  + If the character has lost all their health, remove them from their team.
* Once there is only one team left with characters
  + Declare them the winner
  + Show the winner on screen.
  + Play some nice particle effects/lights.

# Character Name System:

* Should create a pool of names for:
  + First Names
  + Last Names
  + Nick Names
* You should be able to set an individual character whose name is chosen from the pool randomly.
  + Each character should have:
    - First Name
    - Last Name
    - Nick Name
* The final step here is we want to be able to take in a whole team of characters and be able to assign each one their name.

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# Fight System:

* Each character should create a power level based on their dance stats.
* Before the fight the two characters selected from the fight manager should simulate the battle.
  + We should show the chances of each of each character to win on the screen.
* Once the fight starts, we should
  + Have their power levels compared
  + If the teamA character has more than the teamB character, we should award some XP to the team A character and deal some damage to the teamB character.
  + If the player has less than the teamA character, we should award some XP to the teamBCharacter and deal damage to teamA character.
  + If they have the same power levels we should not award any XP.
  + We want to log out the result of each battle.
  + We also want to tell the Battle System that the fight so it can start the next round

# Stats System:

* Needs to generate random physical of our character
  + Strength
  + Agility
  + Intelligence
* Needs to create some dance stats based on a conversion system.
  + Each stat should have a conversion rate i.e. 1 agility = 0.5 rhythm points, 1 strength = 1 style points and 1 intelligence = 1.5 luck points.

# Power System:

* Calculating a power level, each character should be able to create a powerl level based on their:
  + Strength
  + Agility
  + Intelligence
* Calculate their chance of winning.
  + To calculate this we want to be able to first calculate the overall power of the fight, i.e. we have player one and player two’s power levels, what would be their combined power.
  + Once we have the combined, we then want to get a fraction of our power level compared to the total.
  + Finally we want to be able to turn the result of this into a percentage value.

# Leveling System:

* Our level should be set to a default value of one. We should also have our current experience points set to zero and finally have our current xp threshold set to our level multiplied by 100.
* The player should have an XP system
  + When enough xp should increase after each win.
  + When there is enough xp the character should level up.
* When leveling up.
  + The characters level should increase
  + The character's xp threshold should increase, based on the new level.
  + The character's physical stats should increase by a number based on the level.
* Physical stats increase
  + An amount of stat points should be provided upon leveling up
  + These stat points should be distributed evenly or upon a formula to all stats:
    - Strength
    - Agility
    - Intelligence
  + Upon the stats being assigned, we need to recalculate the dancing stats using the Stats system logic.