Capstone Planning Document
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Description:

My Capstone Project will be a dance game. The Player has to face five masters, with different dance moves and beat them by collecting as many points as possible. All takes place in a abstract, futuristic, "blocky" world. Every dancebattle happens in a different arena. The player collects points by hitting blocks, that are thrown at him by the opponents while dancing. There will be a tutorial level, which explains the game mechanics.

Features And Dependencies:

1. 3D Models + Animations (Reference Images)
   a. 5 different dancers with different dance moves.
   b. 1 character (simple cube) in the tutorial. (Voice Recording)
   c. 5 different arenas, with different animated objects and video walls.

2. Game Loop
   a. 1 tutorial with introduction to game mechanics and 5 levels.
   b. 5 dancer with different dance moves and different cubes spawning choreography.
   c. A point counting system with highscore leaderboard at the end.
   d. Intuitive navigation menu to navigate from level to level.
   e. Code a cubes spawning mechanic.

3. Other Effects
   a. Particle Effects in Arena (Smoke, Dust)
   b. Particle Effects when cubes are hit by player.
   c. Spatial Sound for Sound Effects.
   d. Atmospheric lightning guides the players eyes to point of interest.
   e. Cool pushing music for each level.
   f. Videowalls in the arena help set the mood.

Capstone Scoping

4. ## 3D Models + Animations (Reference Images)
   a. 5 different dancers with different dance moves.
      Revised: 3 different dancers are enough. Will use the same dancer for each level and only change the color. Will get motion capture data from mixamo.com. Animate the dance moves by myself would be too time consuming.
   b. 1 character (simple cube) in the tutorial. (Voice Recording)
      Revised: Use text to voice software for Dialog. (Robot Voice)
   c. 5 different arenas, with different animated objects and video walls.
      Revised: 3 levels are enough. Will use one main module for all levels and only change a few parts and the color for every level seperatly.

5. ## Game Loop
   a. 1 tutorial with introduction to game mechanics and 5 levels.
      Revised: 1 tutorial and 3 levels.
   b. 5 dancer with different dance moves and different cubes spawning choreography.
      Revised: 1 dancer, 3 different colors. Different dance moves from mixamo.com.
   c. A point counting system with highscore leaderboard at the end.
      Revised: A point counting system with total score and the cube from the tutorial commenting on score. No leaderboard!
   d. Intuitive navigation menu to navigate from level to level.
      Revised: Still planning this.
   e. Code a cubes spawning mechanic.
      Revised: Use of object pool code to save on performance.

6. ## Other Effects
   a. Particle Effects in Arena (Smoke, Dust)
      Revised: Still planning this. Have to be careful with performance issues.
   b. Particle Effects when cubes are hit by player.
      Revised: Still Planning this. And some haptic feedback.
   c. Spatial Sound for Sound Effects.
      Revised: Still planning this.
   d. Atmospheric lightning guides the players eyes to point of interest.
      Revised: A reasonable mix between realtime and baked light.
   e. Cool pushing music for each level.
      Revised: Will look for Creative Commons Music in case of publishing the game.
   f. Videowalls in the arena help set the mood.
      Revised: Still planning this. Maybe not in every level.