Team 29 Project Charter

Team Members:

Christian Joseph Bortolotti, Christopher Sean Connelly, Haoran Wang, Ji Soo Cha, Seunghyum Lee, Xingyu Wang

Project Coordinator (Manager):

Siddharth Dhar

Problem Statement:

The video game industry is one of the world's largest. Video games as a medium offer a unique platform for creating immersive and relatable environments. It is also especially exciting to see objects or environments that we are familiar with appear in the game. Therefore, we aim to create an exciting and enjoyable gaming experience with story and background elements pertaining to Purdue. Our game will be appealing to students who attend Purdue University.

Project Objectives:

- Contains a complete storyline that will connect different scenes.
- Control will not be taken away from player.
- Frame rate above 75 Hz.
- Scene will contain cohesive theme, visual and audio effect.
- Game will contain couple challenges which will involve multiple different game mechanics.
- User interface is interactive.
- Implement AI enemy to increase game difficulty.
- Implement client-server architecture to support multi-player.
- Text based in-game communication for multi-player support.
- Display top scores of each game mode on the in-game scoreboard.

Tentative Scene Arrangement:

Our game contains several scenes.

1. Starting Scene:
    - When character enters a certain area, it will play an introduction video to give the player more information about game's background story.
    - Player will be able to move freely in this scene and interact with different objects.
    - The environment will have different visual and audio effect.
    - Player will be able to enter to other scenes.
    - Map will be a stylized version of Purdue's campus, with recognisable buildings and topography

2. Challenge 1:
   Sledding down Slayter Hill
   - Player will be controlling the sled to navigate around barriers to sled down slayter hill successfully.
   - UI to show the speed the player is going down and the time.
   - Detailed environment settings.
   - Visual and audio effect.

3. Challenge 2:
   Shoot the basketball.
   - Player will shoot the basketball and score certain points in a given period of time.
   - UI will display the score and the time left.
   - There will be animation in the environment background, such as cars passing by, etc.

4. Challenge 3:
   Retrieve the hidden treasure on campus.
   - Player will use different hints provided to find the hidden treasure on campus.
   - Hints will be given by conversational text boxes.
   - Player will need to answer questions to get the information.

5. End Scene:
   The end of the storyline. A short video clip will be shown to congratulate the player on the great achievement. Also the credit for the project contributors will be shown.

Stakeholders:

- Project Owners: Christian Joseph Bortolotti, Christopher Sean Connelly, Haoran Wang, Ji Soo Cha, Seunghyum Lee, Xingyu Wang
- Project Developers: Christian Joseph Bortolotti, Christopher Sean Connelly, Haoran Wang, Ji Soo Cha, Seunghyum Lee, Xingyu Wang
- Users: Purdue students
- Project Coordinator (Manager): Siddharth Dhar

Project Deliverables:

Technology that will be used:

- Unity 3D game engine
- Writing C# scripts for different game features

- Use Blender to create our own 3D models if needed
- Using Node.js framework for our server