**Goal: Assignment 1**

**Group Members**: Shreyas Dutt, Manpreet Singh, Samardeep Singh Sindhu, Shefreen Kaur, Paramvir Singh Thind, Sahibjeet Singh

**Phase 1: Noise Generation and Analysis (Sept 24-25)**

* Research: Explored various noise types in FastNoiseLite (Cellular, Perlin, etc.) and their parameters using course materials and external resources (YouTube, documentation). (Shefreen, All)
* Implementation: Decided to use Perlin noise for smoother terrain generation. (Shefreen)
* Documentation: Created a shared Google Doc to track individual progress. (All)

**Phase 2: 3D Terrain Generation and Implementation in Godot (Sept 25-27)**

* Godot Setup: Created a new Godot project and dedicated scene for terrain. (Shreyas, Manpreet)
* Mesh Generation: Implemented code to generate the terrain mesh using Perlin noise. (Shreyas, Manpreet)
* World Environment Setup: Set up basic lighting and environmental elements. (Paramvir)
* Camera Control: Configured basic camera movement to navigate the generated terrain. (Sahib)

**Phase 3: Testing and Refinement (Sept 27-28)**

* Integration and Debugging: Merged all components into the main project and resolved any conflicts or errors. (Samardeep, All)
* Parameter Tweaking: Experimented with different FastNoiseLite parameters, adjusting frequency and amplitude to fine-tune terrain features. (Shefreen, All)
* Testing and Feedback: Conducted tests with various parameter sets, providing feedback on the visual appearance and performance. (Samardeep, All)

**Final Steps (Sept 28)**

* Compilation: Finalized the Godot project build. (All)
* Documentation: Documented the development process, challenges, and solutions. (All)
* Submission: Submitted the project files and documentation.