**Game Development Project Specification**

**Project Overview**

In this project, you will create a simple 3D game using Unity with assets that you design in Blender. The final submission will include:

* A fully playable game
* All project files
* An exported Unity package ready for the final build
* A standalone executable build of the game
* A project report explaining your development process

**Key Requirements**

1. **Create & Export Assets** – Design 3D models in Blender and export them to Unity.
2. **Game Development** – Add interactivity, animations, camera controls, and sound in Unity.
3. **Game Build** – Compile the game into an executable file.
4. **Export Package** – Submit a Unity Package containing all necessary project files.
5. **Project Documentation** – Write a detailed report about your work, challenges, and learning.

**Development Steps**

**1. Asset Creation & Export**

* Use five animated armature and mesh models from your project. Export them as FBX files.
* Create additional game assets (e.g., obstacles, collectibles) and export them as well.

**2. Setting Up in Unity**

* Import the FBX files into Unity.
* Configure the Animator Controller for character animations.
* Enhance the game scene by adding:
  + Game assets (terrain, props, UI elements)
  + Lighting and environmental effects

**3. Gameplay Implementation**

* Implement character movement using **WASD and arrow keys**.
* Set up a **third-person camera** that follows the player.
* Add audio features, including background music and sound effects.
* Include a **quit button** and a **mute button** for sound control.
* Define win/lose conditions, such as:
  + A **collectibles and scoring system**
  + Game completion criteria

**4. Game Build & Export**

* Compile the project into a standalone **executable file**.
* Export the final Unity package containing all essential files.
* Keep a well-organized file structure for easy submission.

**5. Submission Guidelines**

* Submit all required files. If the total file size is too large, upload them to OneDrive and share the link.
* Ensure that all files are **clearly labeled and properly organized**.

**Project Report Structure**

Your report should be clear and well-structured. Follow this format:

**1. Introduction**

* Explain your game concept.
* Describe how you came up with the idea.

**2. Project Development**

* Detail your step-by-step workflow, from creating assets to building the game.
* Explain the technical challenges you faced and how you solved them.
* Describe the key programming concepts used (e.g., movement controls, animations, UI, and scoring system).

**3. Conclusion**

* Reflect on your achievements and lessons learned.
* Discuss the challenges you encountered and how you overcame them.
* Highlight the parts of the project you are most proud of.

**4. Future Work**

* Suggest possible improvements or enhancements for the game.
* Explain how you would expand its features if you had more time.

**5. References**

* List all sources used (tutorials, books, websites).
* Properly cite any third-party assets or code included in your project.

**Additional Notes**

* You are strongly encouraged to create original assets in Blender.
* Your game should include **basic mechanics** such as movement, animation, and interaction.
* Adding **extra features** (like UI elements or additional levels) is encouraged.