Game Engine Part 3

Question 1: Since our game is an instanced based platformer, there will be restrictions that won’t allow us to make the game open world, auto generating terrains and objects won’t be as easy since we have preset levels. Making a game 3D would also be difficult with our game engine because it is simply not made to generate 3D physics and render in third dimensional objects. On the same topic, directional sound effects for 3D games won’t be implementable.

Question 2: Currently our game is a platformer, if we wanted to change our game engine to adapt for an FPS (3D), we would need to add in rendering for 3D objects, meshes, collisions, sounds and a 3rd dimensional axis for most functions to generate the world and implement actor interaction. To implement third dimensional models into our game engine, we would need to change our rendering engine to support 3d shapes and textures instead of just sprites, it will also have to prerender objects around your character which can’t be seen by the camera (Example behind you), In a 2D environment this will only render in the parts of the level which surrounds the character. Collision detection will change to multidimension, not only having 1 rectangle for collision detections. We need to add mouse event for input since we only have key events in game right now, change to cursor when interacting with UI such as main menu. Distance and direction volume have to be added to the sound engine. Add a HUD that doesn’t move with your camera. If this was an online fps game, we would need to add a way to send and receive packets to servers to interact with different players in the instance. Since fps games require very quick and fast interactions, optimizing networking for little packet loss and lower latency is prioritized.