Task 1:

- **Unreal engine** – it uses C++. Fortnite was programmed using Unreal Engine. It is both a 2D/3D engine.

- **Unity** – Mainly C#, but also uses JavaScript. Rust was programmed using Unity. It is both a 2D/3D engine.

- **Godot** – Mainly GDScript, but also uses C++, C# etc. Rogue State Revolution was programmed using Godot. It is both a 2D/3D engine.

- **GameMaker** – Delphi programming language. Hotline Miami was programmed using GameMaker. It is primarily a 2D engine but can use 3D effects.

- **AppGameKit** – Primarily programmed with AppGameKit (AGK) script which is a basic language. Arkeos Chronicle was programmed using AGK. It is a 2D engine.

Task 2:

A)

JPG – It is a compressed image format with a ratio of 10:1. This can also be adjusted so the image quality would not decrease significantly.

PNG – it is a lossless compression format which means that when it is compressed the quality of the picture stays the same.

GIF – It also uses lossless compression. It is mostly used on websites and in programs. This is mostly used for animated pictures.

B)

MP3 – It is a used to store audio files in a compressed audio format. It uses the layer 3 audio compression which boosts quitter signals and attenuating the louder ones.

WAV – it is used to mainly store audio files on PCs. Wavs also sound better than MP3 mainly because it does not compress the audio files, but this also means large file sizes.

Task 3:

A)

It is very important to use compression on images because of several reasons, such as, saving storage space and communication bandwidth. Images take a lot of storage space and by using image compression the file gets reduced in size, but this also has a downside to it. If you compress the image significantly you lose the quality of the image, so you may need to balance the reduction in size so that the quality does not degrade significantly. It is also used so that images load faster. For example, if you want your website to load faster or emails sent quicker using image compression helps significantly.

B) Before the Threshold point the audio does not get compressed because the sound is low. (this is an example)