**Game Description:** A personal project made in unity featuring a sword-wielding protagonist fighting enemies through a level. The level consists of multiple rocky platforms above a lava lake. There are 2 implemented enemies: A lizard that chases and bites at the player and a Butterfly that shoots fireballs towards the player when they get close. The player’s actions include swinging a sword in a 4-hit combo, roll dodging, jumping, and firing a spell. There are 2 different spells that can be chosen from: A fireball and an earthquake/shockwave.

**Analysis:**

There are many aspects of the game which can be enhanced by sound in this project. In terms of sound effects, the player’s actions of attacking, dodging, casting, jumping, and running should all have distinct effects. There should be effects for all of the actions that the enemies will take. And finally, there should be sound effects for dealing and taking damage. Using FMod parameters could make the damage sounds more intense depending on the strength of the hit.

The interface needs sounds to indicate when the player has switched spells. In terms of ambiance, I think a combination of a bubbling lava effect and a rocky cracking sound should convey the surroundings of the area quite nicely. The use of randomized sound selection could be very useful in making the lava feel more chaotic and fiery.

Finally, a music track could be added to give the level more character. I think I would go for a more intense track for this level, as the environment feels very dangerous.

**Sound Work:**

**Player SFX**

* **Footstep**
  + For this sound I wanted to make sure that it correctly conveyed the weight and speed of the player character. I modified the source sound to make it play faster and at a higher pitch in order to do this. Fmod random pitch modulation is used to give it a more natural feel.
* **Jump**
  + The jump sound effect for the player is similar to the footstep sound in that I wanted it to sound fast and snappy so the player gets instant audio feedback on jumping. The source “woosh” sound is quickened and pitched up to achieve this effect.
* **PlayerDamaged**
  + With the player damaged sound effect, my main priority was making sure that it felt impactful and noticeable. The source sound I chose for this impact was heavy, and I slightly pitched it down as well to make it distinct from many of the other “hit” sounds, so that it is recognizable.
* **PlayerSlash**
  + For the Player’s sword slashes I used a bamboo swinging sound as a base, and altered it a bit to make it feel fast and light. This makes it fit well with the player’s sword swing animations. Some randomization is added to the pitch to make each swing feel a bit different.
* **Roll**
  + The sound for rolling uses the same base sound effect as the sound for jumping, but for rolling it is made to sound much more sluggish and slow, while still starting up fast. This matches with the animation and movement of the player’s roll, where they start off very fast and get slower as they exit the roll
* **PlayerDefeated**
  + The sound effect that plays when the player is defeated is very long and dramatic. It uses the same sound as when getting hit, but here it also has an echoed effect added on. This makes the sound very impactful, and it plays for much longer than most other sounds.
* **PlayerLand**
  + This sound uses the same base sound as the player footstep sound, and it is overlaid with a modified version of the player damaged sound. The player damaged sound is toned down a lot and the sound plays at a low volume. This sound helps the player understand the moment at which they hit the ground.

**Lizard Enemy SFX**

* **LizardBite**
  + The lizard biting sound effect was made with a base sound of wood being snapped. I sped up this audio in order to create a quick snapping sound for when the lizard bites at the player. Fmod pitch randomization was used to make bites feel a bit more varied.
* **LizardDamaged**
  + The lizard damage sound was made using two base sounds, one being the impact sound also used in the player damaged sound effect. The other is an audio recording of a snake hissing. Both sounds are modified to give it a more weighty feel.
* **LizardFootstep**
  + The lizard’s footstep sound uses two base sounds, one being the impact sound used for player footsteps and the other is a slapping sound effect used to make the sound of the lizard’s foot slapping against the rocky floor. The sound is randomized and pitched up to emphasize the lizard enemy's lighter weight.
* **LizardDefeated**
  + The lizard defeated sound effect is a combination of the hissing sound and the dramatic shing sound effect used in the generic hit sound. The hiss is lengthened and the shing has an echo applied to it. This sound is meant to be very noticeable and satisfying.

**Butterfly Enemy SFX**

* **ButterflyDamaged**
  + The sound effect for when the butterfly enemy is damaged is made with two base sounds, one is the impact sound used in the player damaged sound effect while the other is an alien-sounding insect chatter noise. I modified the chatter noise to get it sounding how I wanted and a Fmod pitch randomization was used to make it sound more natural.
* **ButterflyWingFlap**
  + The wing flapping sound of the butterfly uses the same base sound as the player’s roll and jump sound, but it is slowed down and pitched down to emphasize the flapping pushing air downwards and lifting the butterfly upwards
* **ButterflyDefeated**
  + The butterfly defeat sound is a combination of the insect chattering used in the damage sound as well as the dramatic shing used in the generic hit sound. Both are modified to be longer and the shing is given an echo.

**Generic SFX**

* **Earthquake**
  + The sound used for the earthquake spell uses two base sounds, which are the sound of many rocks being moved around and an explosion sound. The sounds are played overlapping with a slight delay to make it sound as though the explosive force of the spell moved the earth around. Both sounds are pitched down to make it feel much bigger and more impactful.
* **Fireball**
  + The sound used for fireballs uses two base sounds, the whoosh sound and a crackling fire sound. The woosh is modified to make it sound like a burst of flame and the crackling fire is added to give the sound effect context.
* **Hit**
  + The hit sound consists of three separate sounds of increasing intensity. This effect uses an fmod parameter to play a blend of these sounds corresponding to the amount of damage dealt by an attack. This functionality lets it give an auditory cue to the player of how much damage they are dealing with an attack.

**Interface SFX**

* **SwitchSpell**
  + The sound for switching spells is a simple beeping sound, modified slightly as to not be irritating to hear. It is not modified by many fmod aspects in order to make it sound consistent no matter what.

**Ambiance**

* **LavaAmbient**
  + The ambient lava sound is made with the sound of bubbles being blown in water. It is slowed and pitched down in order to make it sound as though the bubbles are coming from the much thicker lava of the cave. It is played at a low volume so as to not interfere with the auditory cues for gameplay while still providing atmosphere to the area.
* **LavaBurn**
  + The lava burn sound uses a base crackle sound, modified to sound as though it is lava chaotically popping. Fmod is used to playing it with varied delays to make it feel more random and sporadic.
* **StoneCrack**
  + The base sound used for the stone cracking sound is ice being cracked. It is modified to sound more like solid rock shifting within the cavern. It is played with varied delays like the lava burn sound to make it feel more random.