**Key coding challenges:**

* One challenge was trying to make the enemy move by itself, this was difficult because if timers were used, the enemy would not stay on the platform if they were pushed by the player. Therefore, to overcome this problem I used collision detection to detect boundaries and change walking direction
* Another challenge was trying have unique background sound for each level, this was a challenge because when transitioning to the next level, the sound from the previous level carries on playing. I solved this problem by initialising all the background sound, and when going to the next level I used a method from SoundClip to stop the music.
* Another coding challenge was to animate some objects in the game, such as the player and the enemy. There has to be different images rendered for the player as their state can be idle, walking left or walking right. To overcome this, i used GIFs and inbuild methods to remove all image before loading the correct gif.
* Another problem I faced was with code duplication when creating platforms for levels. Therefore, to over-come this I created a class that has a method that takes in parameters that defines the size and position of the platform. This made the code more efficient and without code duplication

**Main features of the game:**

* At the top of the screen there is a menu, where you can **change levels at any point** in the game and **change the speed of character**
* For each level in the game there is a **distinct background sound**
* There are **distinct sounds for each item that the player can pick up**, this includes the heart, diamond, and enemy. Also**, when transitioning to the next level there is a different sound**
* Below the menu bar, there are **options to pause, resume, restart and quit the game**, the restart button resets the position of the characters in the current level
* The **enemies in the game move automatically**, this is done using collision detection and adds some difficulty to the levels
* The **value of the lives carries on to the next level**

**Java docs**

* The following classes have full java docs and are annotated
  + Player.java
  + PlatformMaker.java
  + Level1.java
  + EnemyCollison.java
  + ItemPickUp.java

Link to video - <https://youtu.be/t1-FVqPP5NQ>