

PROJECT
SWIM AWAY!



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Present

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040613204 Object-Oriented Programming

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Introduction

Origin and importance: Back then , when I was a kid. I like to play these kind of game which you need to get away from something like police or monster. So I tried to create it with java.

Project Type : Game

Benefits : It will improve your aptitude, tactic and prolem solving and having fun with it.

Project scope :

● Detail

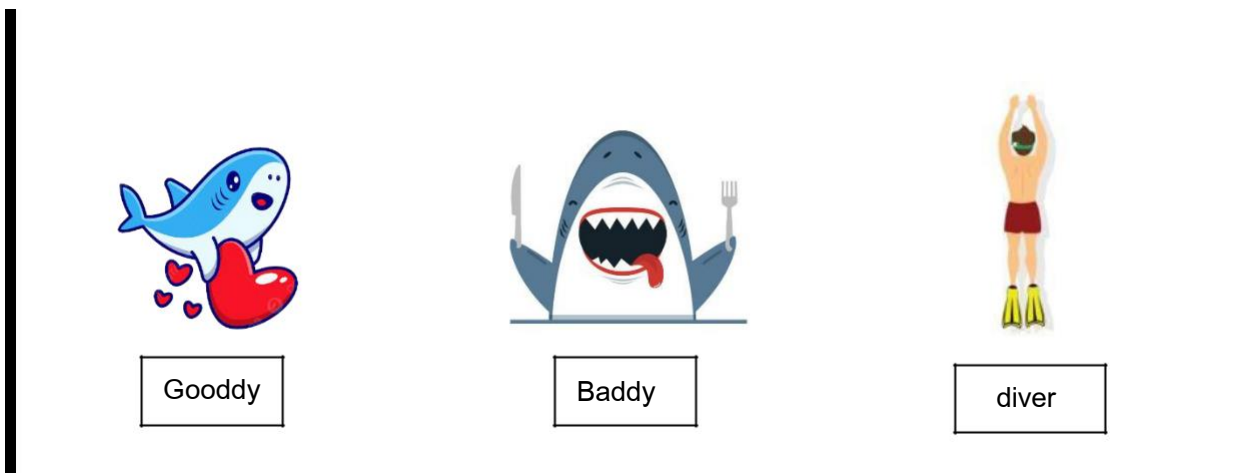
When a guy got left behind between the pacific ocean among the sharks. He has to avoid them to go back to his family. At least, he's a diver ,so he's faster than them. Let cheer him up to leave these scary guys.

● How to play

press "A" to go left , press "D" to go right to get away from shark
press "P" to pause press "T" to show draw time

● Storyboard

-characters



-Scene

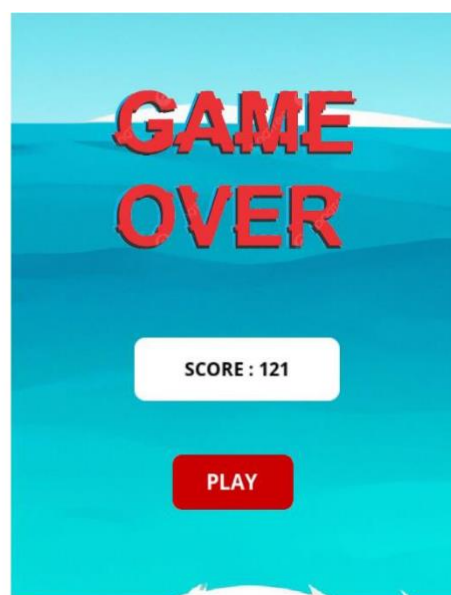
-Start



- If diver got attacked by baddy , heart will decrease and if diver got helped by goody heart will increase.



- If you pass them “YOU WIN” but if not “GAME OVER”



● Benefits

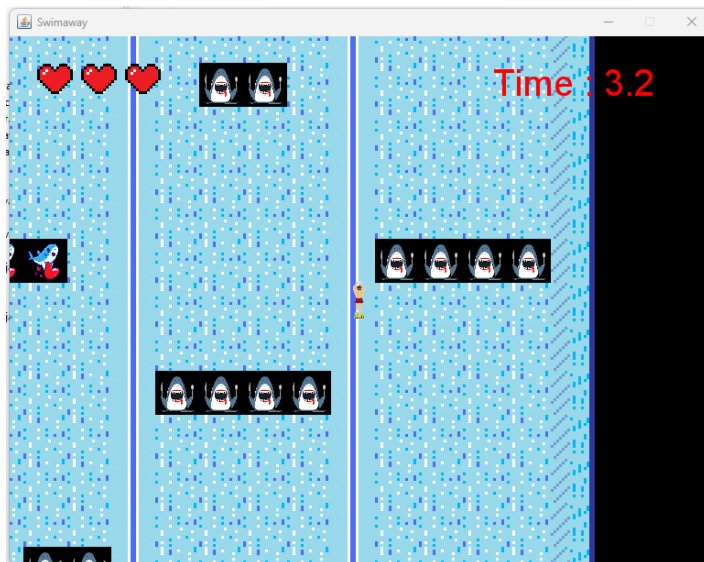
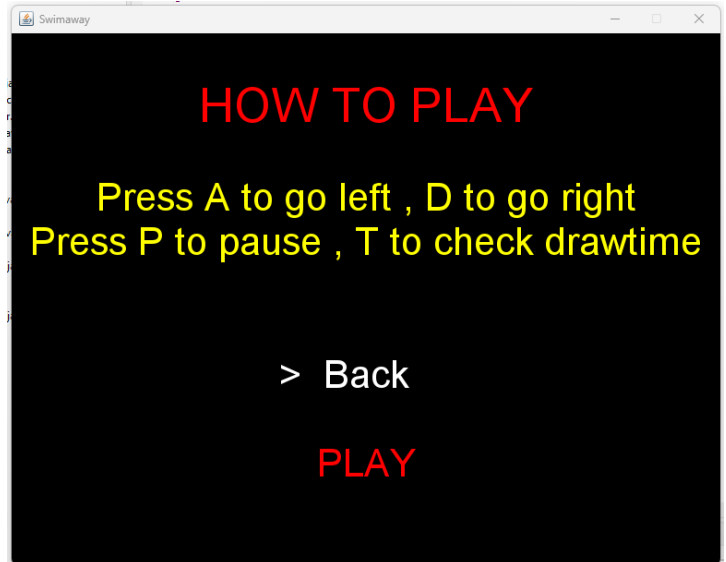
1. For improving aptitude
2. For fun
3. To be patient

● working table

ลำดับ	รายการ	5-15 ก.ย.	16-25 ก.ย.	26-30 ก.ย.
1	หารูปตัวละครและทำกราฟฟิคต่างๆ			
2	ศึกษาเอกสารและข้อมูลที่เกี่ยวข้อง			
3	ลงมือเขียนโปรแกรม			
4	จัดทำเอกสาร			
5	ตรวจสอบและแก้ไขข้อผิดพลาด			

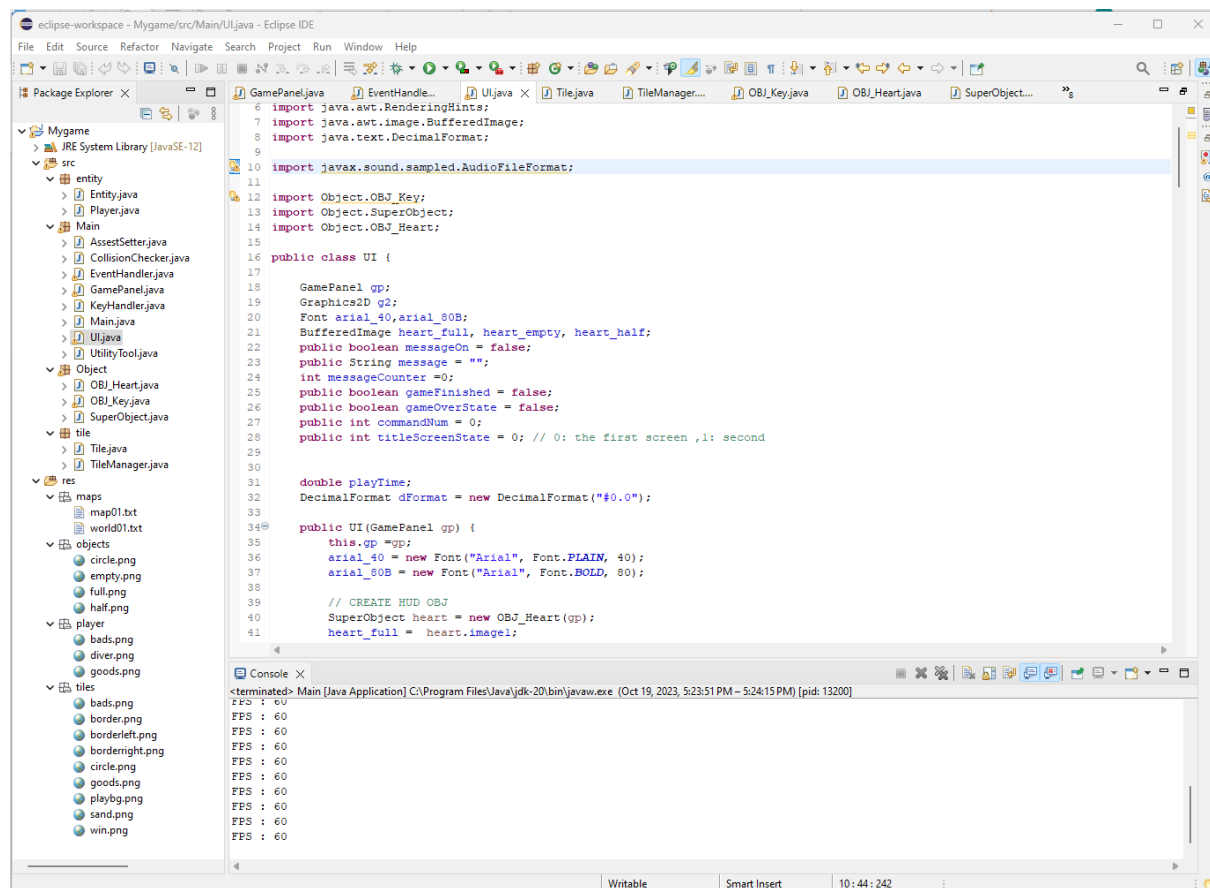
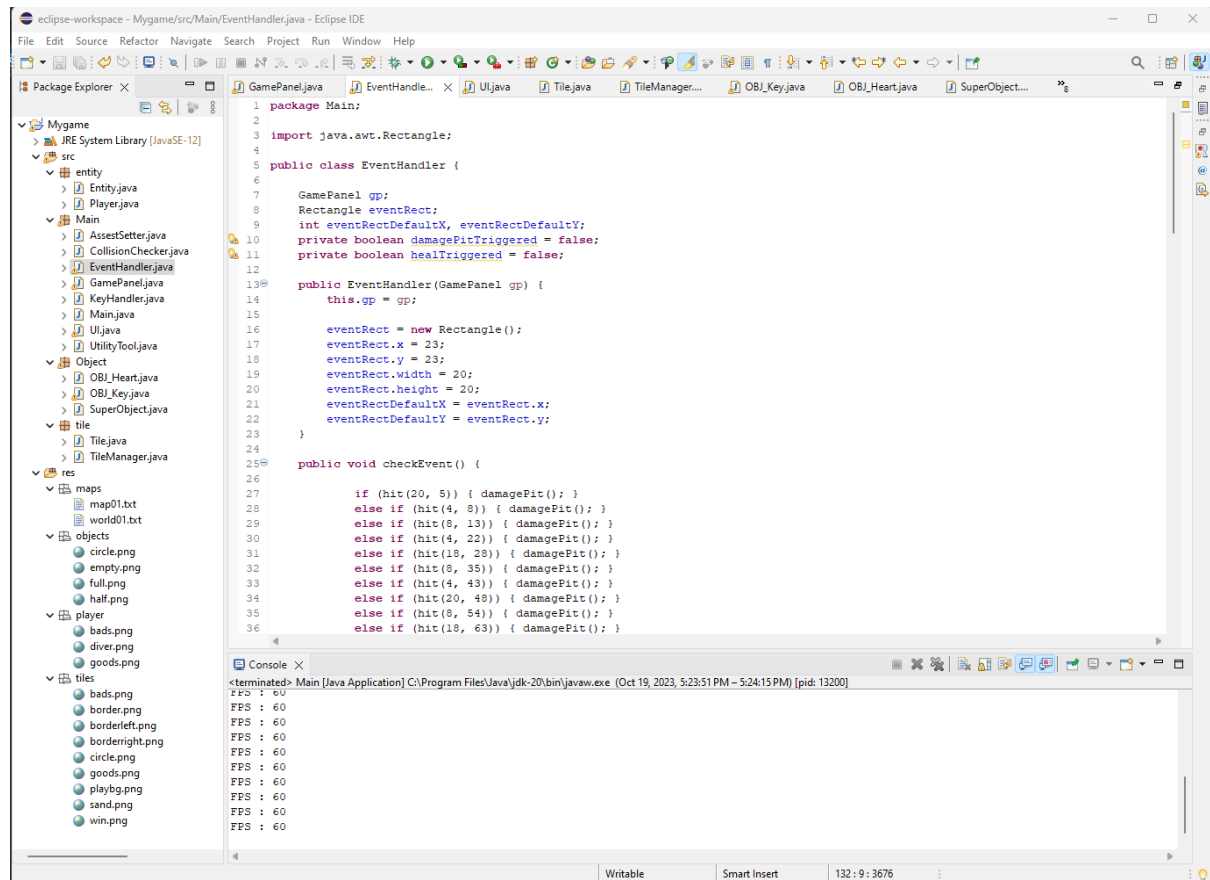
Development:

How to play the game: First, you need to select the start button at first screen then it will appear the 'how to play stage'. Then you can choose that you want to go back or play the game. After you select play then when you entered the play scene you can move with "w,a,s,d" and you have to avoid the bad shark until you finish the score will appear on the top left.



Constructor:

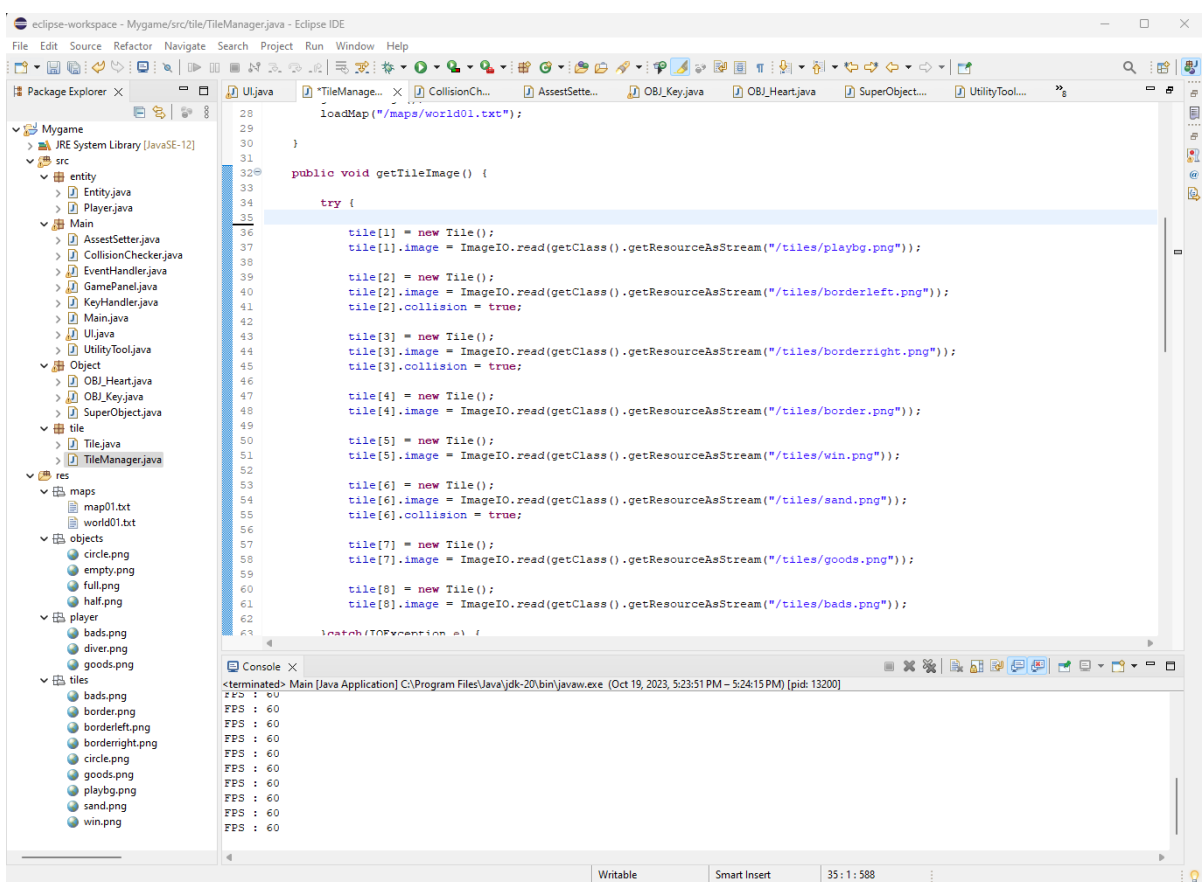
you can see in line 13 constructor to define a value in class it has `GamePanel gp` implement and call functions. In this case is to do some event such as get heal or hit by enemy.

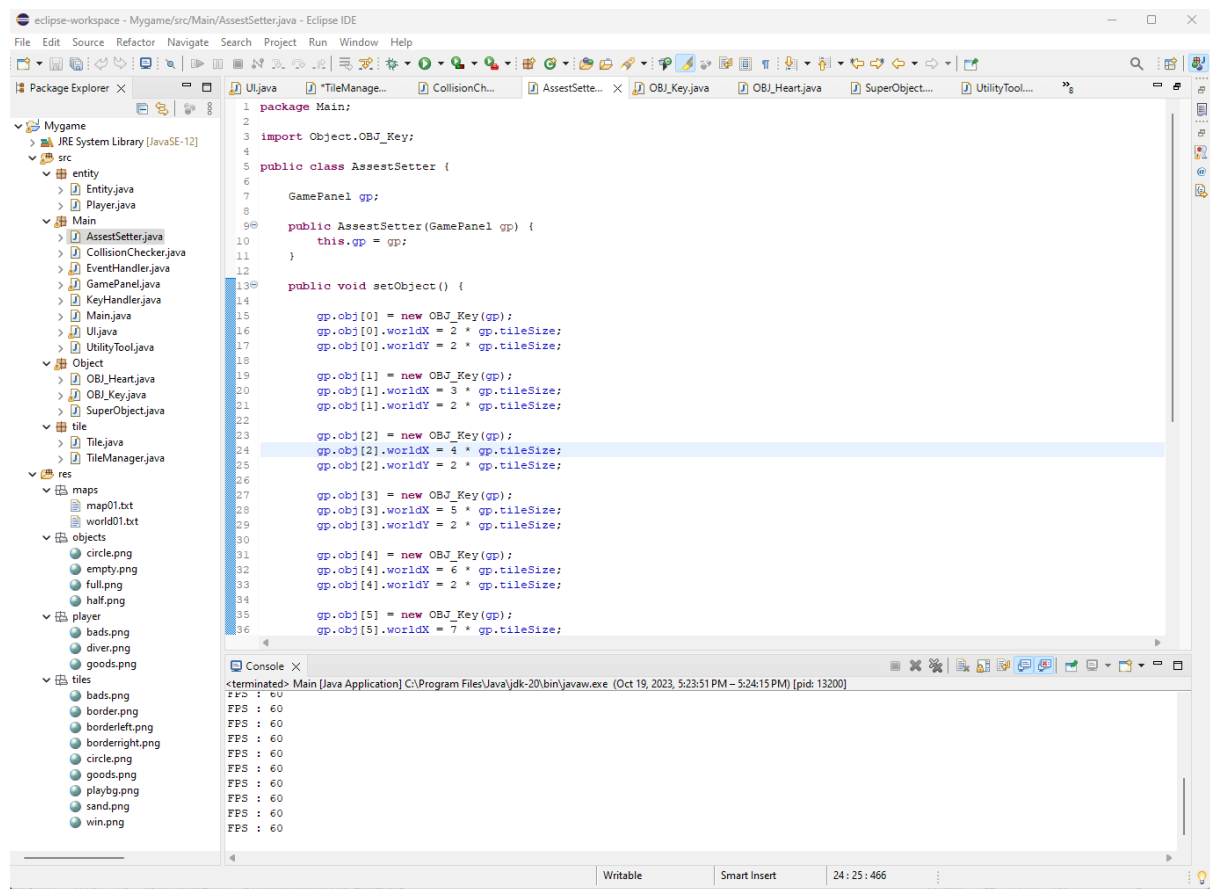


Another constructor is in 32nd line and it also called GamePanel gp which it will show something in window such as time and texts.

Encapsulation:

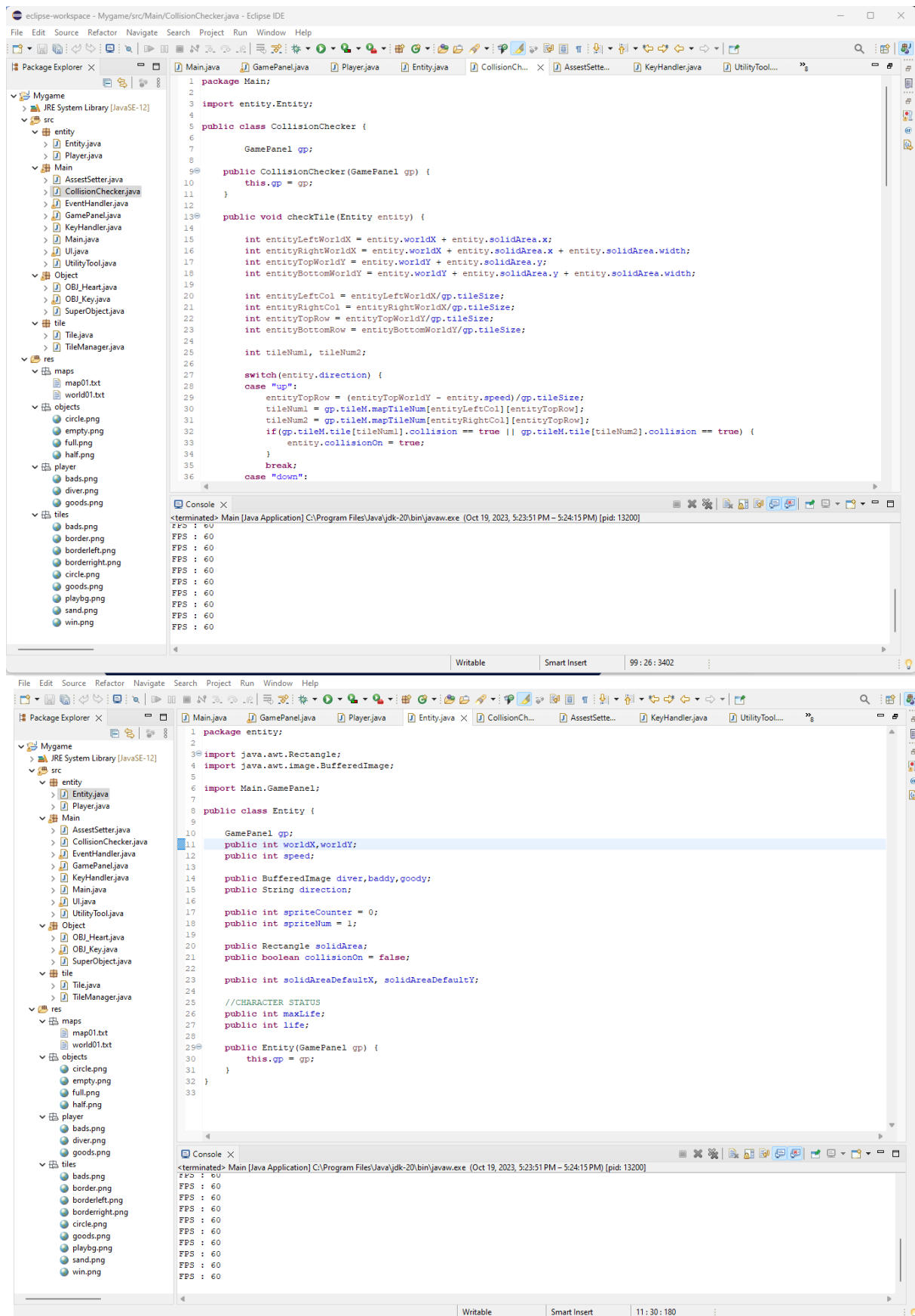
Gettileimage function in this picture is to get picture that's allocate in /tiles/ which using array to contain it and has to define number to collect and store it.





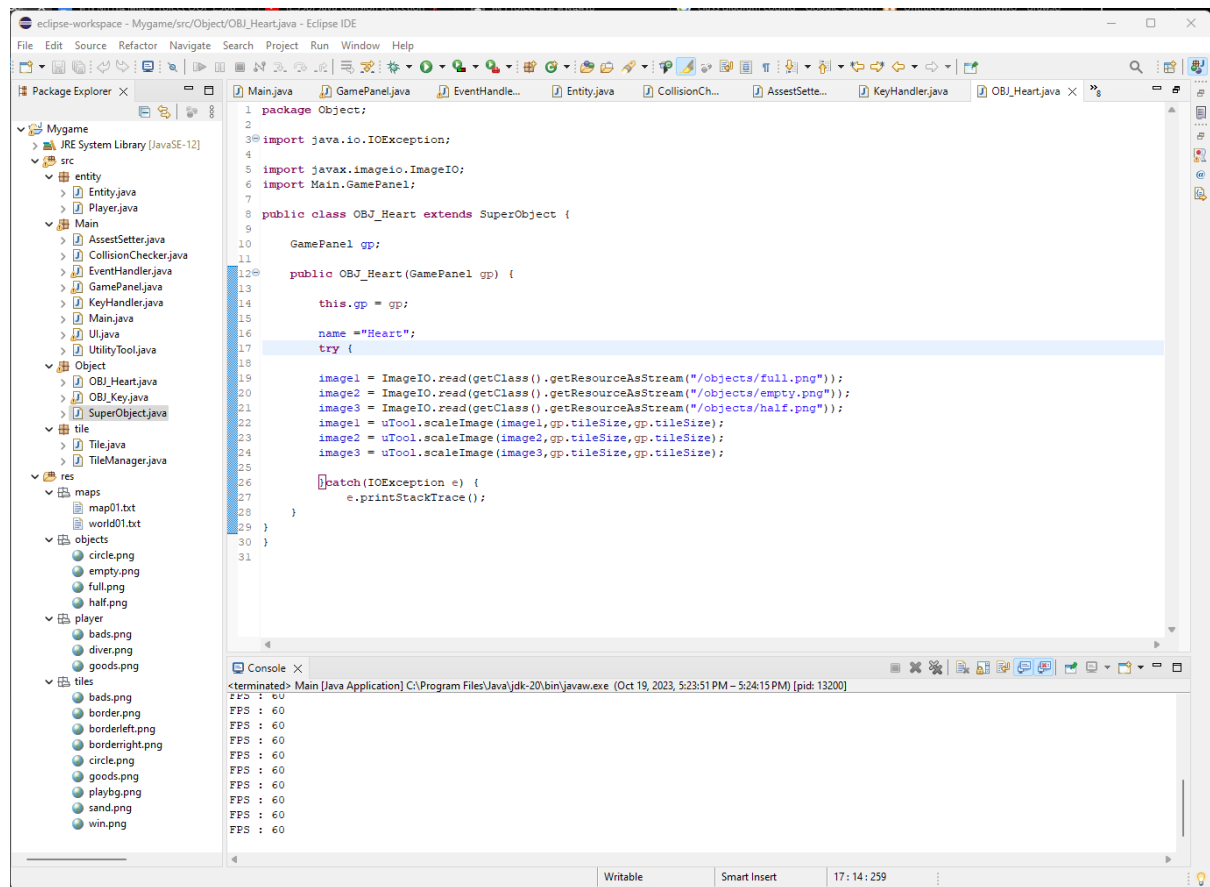
setObject in this picture will set the X and Y in the map.

Composition:



In this you can see the relationship between these two classes Which sharing the same WorldX and Y.

Inheritance :



In this picture you will see class OBJ_Heart extends SuperObject. Which contains image and variables and methods And it can use everything in SuperObject by extends it.

And in this case it extends SuperObject which contains images that will be used in this OBJ_Heart class.

The screenshot displays the Eclipse IDE interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, and Help. The Package Explorer on the left shows the project structure for 'Mygame', with a 'src' directory containing sub-packages like 'entity', 'main', 'object', 'res', 'maps', 'objects', 'player', and 'tiles'. The main editor window shows the source code of 'OBJ_Heart.java'. The code imports 'java.io.IOException', 'javax.imageio.ImageIO', and 'Main.GamePanel'. It defines a public class 'OBJ_Heart' extending 'SuperObject', which contains a 'GamePanel gp' attribute. The constructor 'OBJ_Heart(GamePanel gp)' initializes 'gp' and sets the 'name' to 'Heart'. It then reads three images ('full.png', 'empty.png', 'half.png') and scales them to the game panel's size. A catch block for 'IOException' prints the stack trace. The Console at the bottom shows the application running successfully, with the message 'terminated: Main [Java Application] C:\Program Files\Java\jdk-20\bin\java.exe (Oct 19, 2023, 5:23:51 PM - 5:24:15 PM) [pid: 13200]'. The status bar at the bottom indicates 'Writable', 'Smart Insert', and the time '17:14:259'.

Polymorphism :

[illegible]

	Writable	Smart Insert	12 : 55 : 250	:	:	:
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GUI and EvenHandling



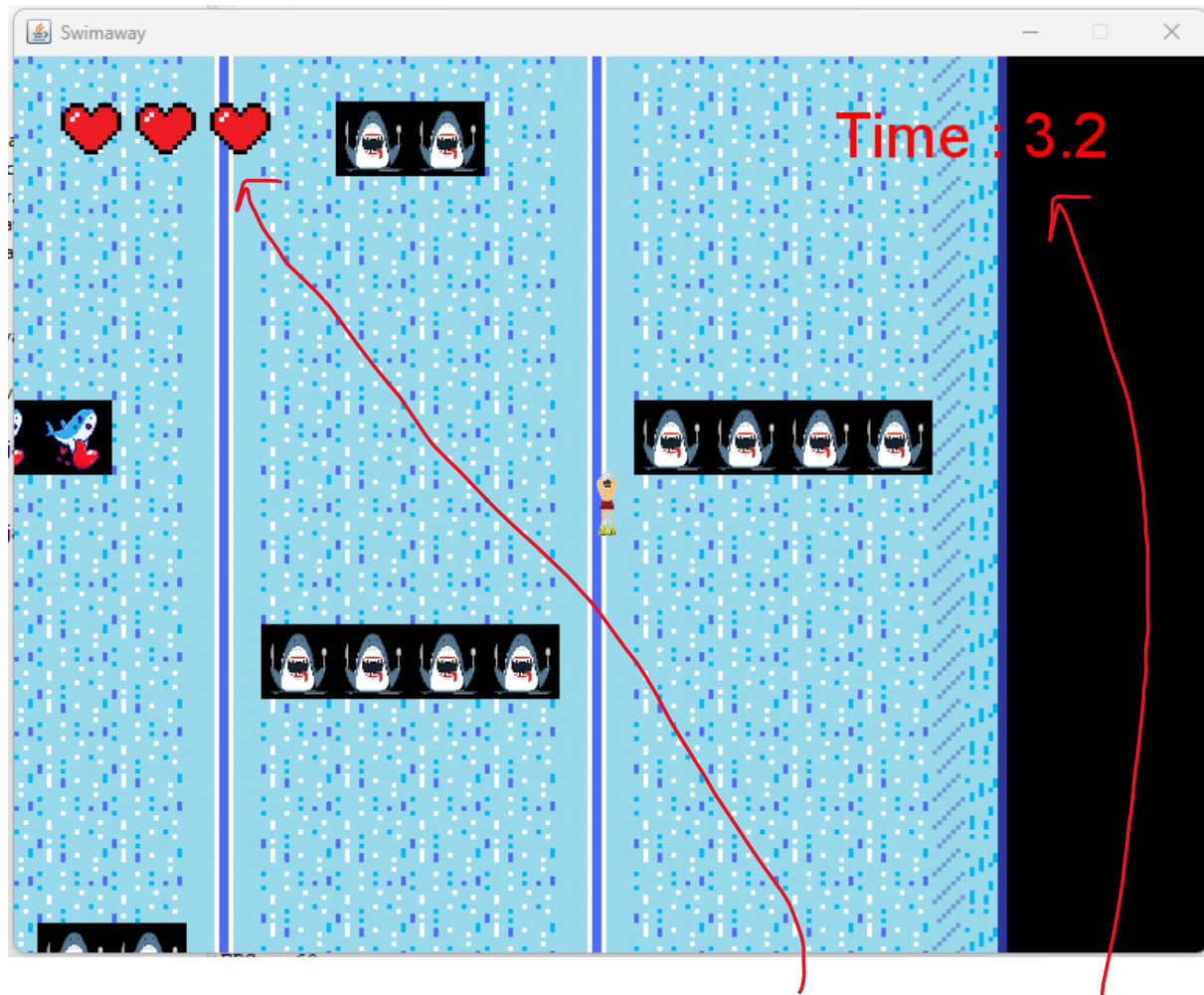
In my game's menu, it has 3 components are 2 buttons and 1 String

Event Handling : using "w" and "s" to move the cursor up and down.

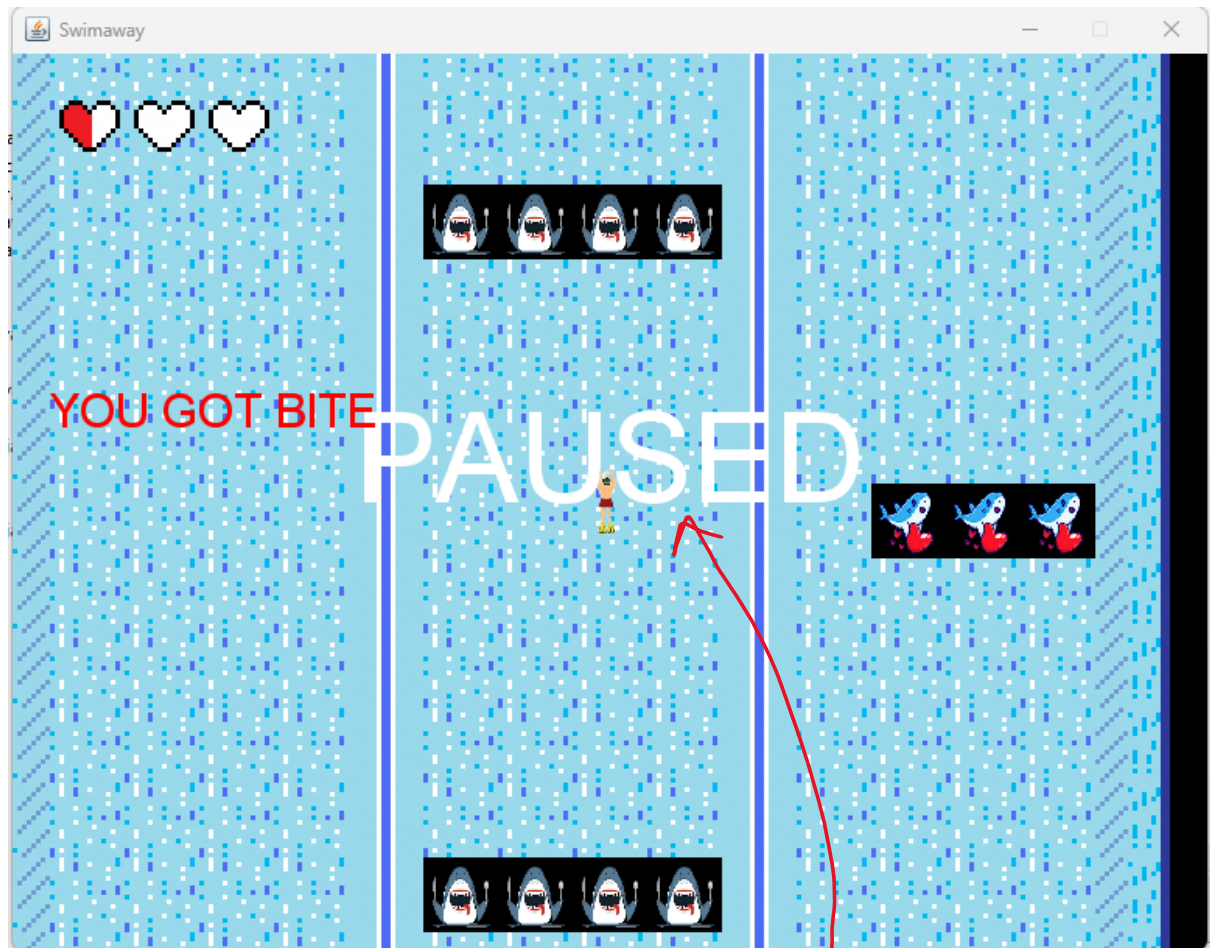


In my game's How to play, it has 3 components are 2 buttons and 1 String

Event Handling : using "w" and "s" to move the cursor up and down.

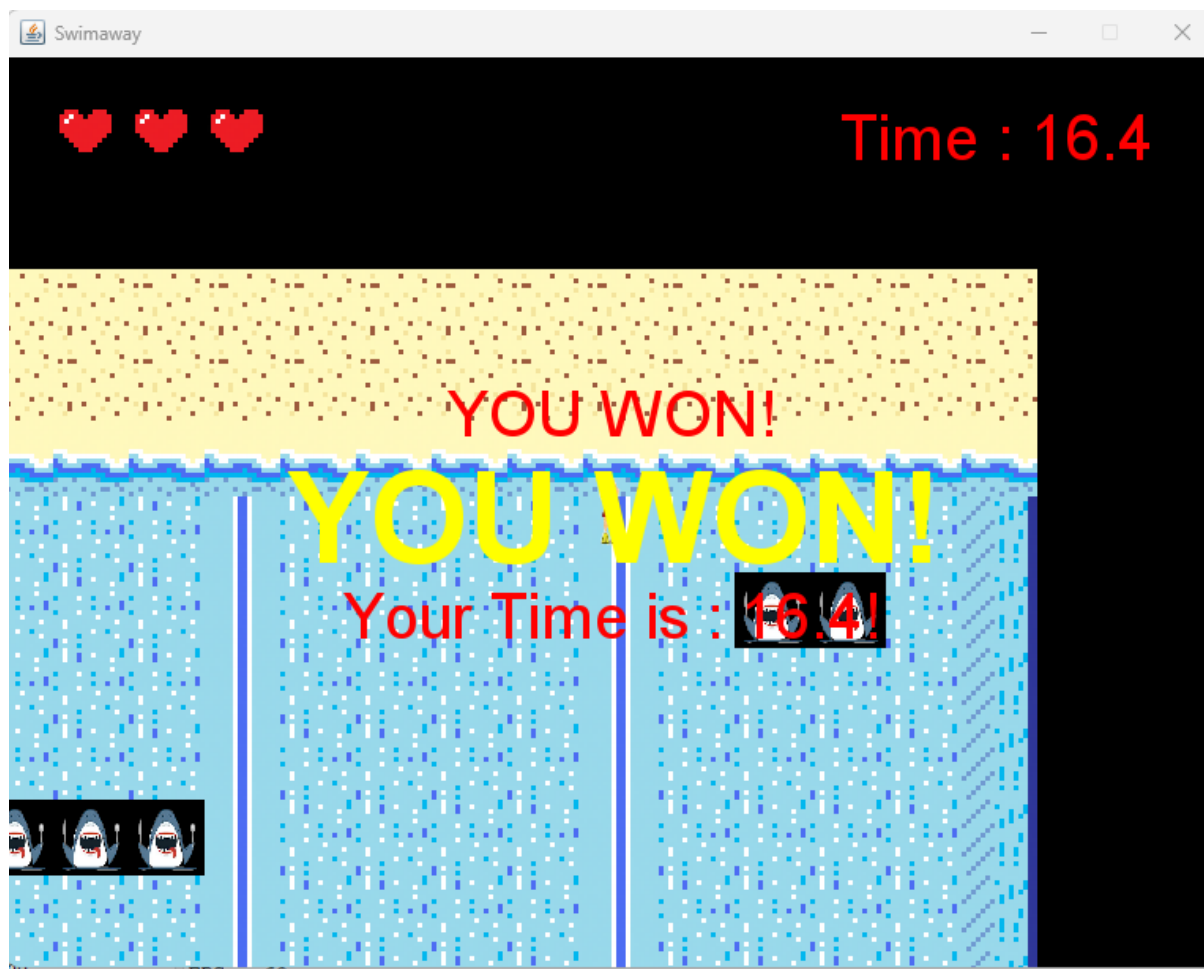


In game-play, it has 2 components are 3 images and 1 String
Event Handling : using "w" , "a" , "d" to move the character
forward , right and left.



In pause screen, it has 1 component is 1 String
Event Handling : using "p" to resume the pause and play.

And In won,gameover screen, it has 1 component is 1 String
Event Handling : no event handling.



The main Algorithm : in this game it will check the heart of player. If it's 0 that's mean game over but if no, it continues until player went into goal. But if you collect the heart after hitting shark, it will increase health of the player to continues also.

Summary

Problems : At first, I want to create the game that can only move 3 columns but for the game , it couldn't do that because of the tiles and map which I want to create the bigger map so I desired to use freely move instead. So player can move everywhere in the map except moving backward. And in the game it's still has some bug when player moves sometime the hit detection won't work and I tried to fix it but It seems nothing worked.

Program highlight : the character player or diver and move around the map freely which gives player freedom to move and have many playstyle to use.

Advice to Prof. : need more time to learn about the game coding and web coding but for now I did it not that good so I want to practice more.