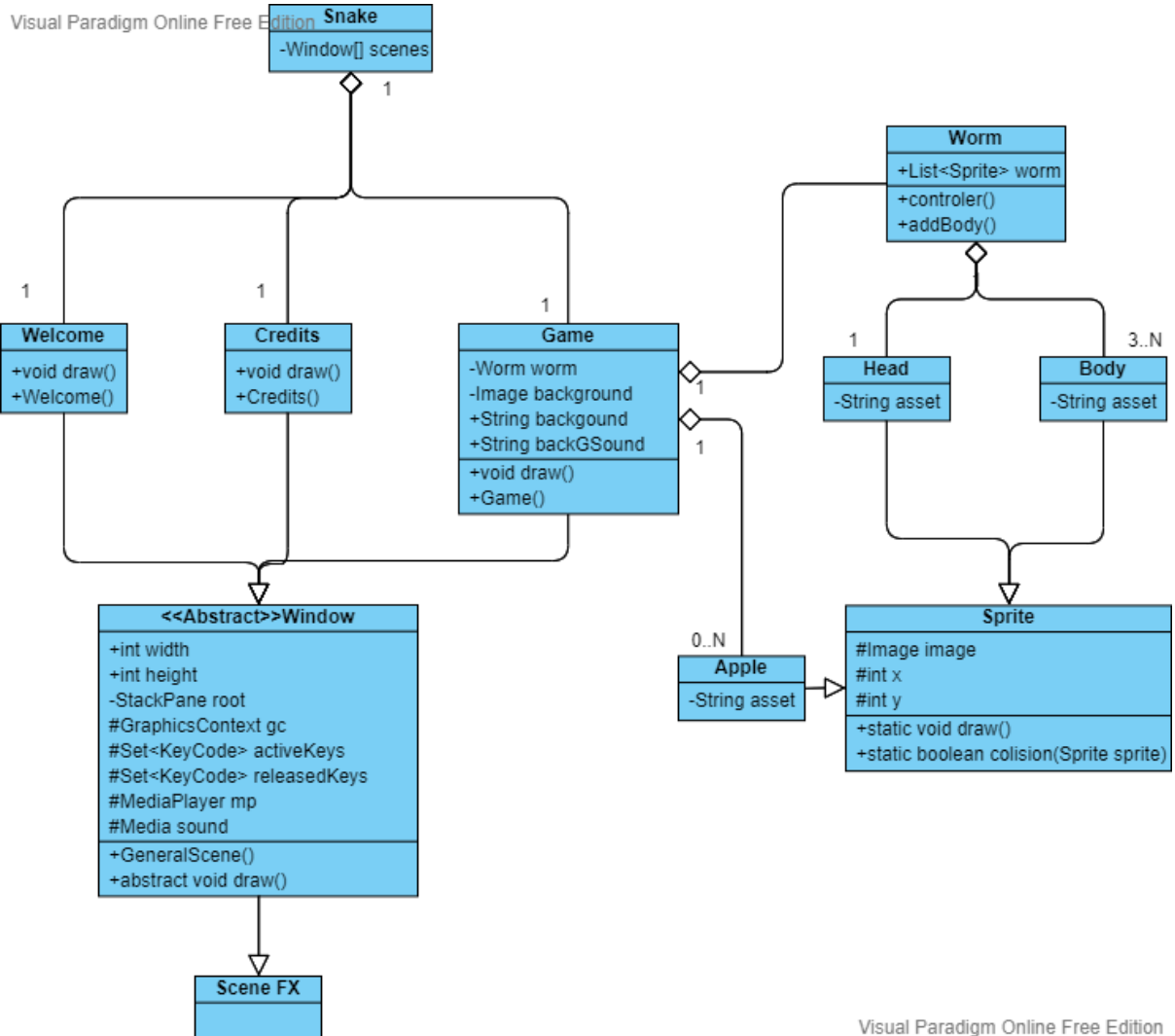# Delivery #1: Project analysis

Introduction:

The Snake is a javafx game where we can move a worm that can move and eat random apples that appear. You lose if it touches the map limits or eats his own body. When the worm eats an apple, it gives score and more size.
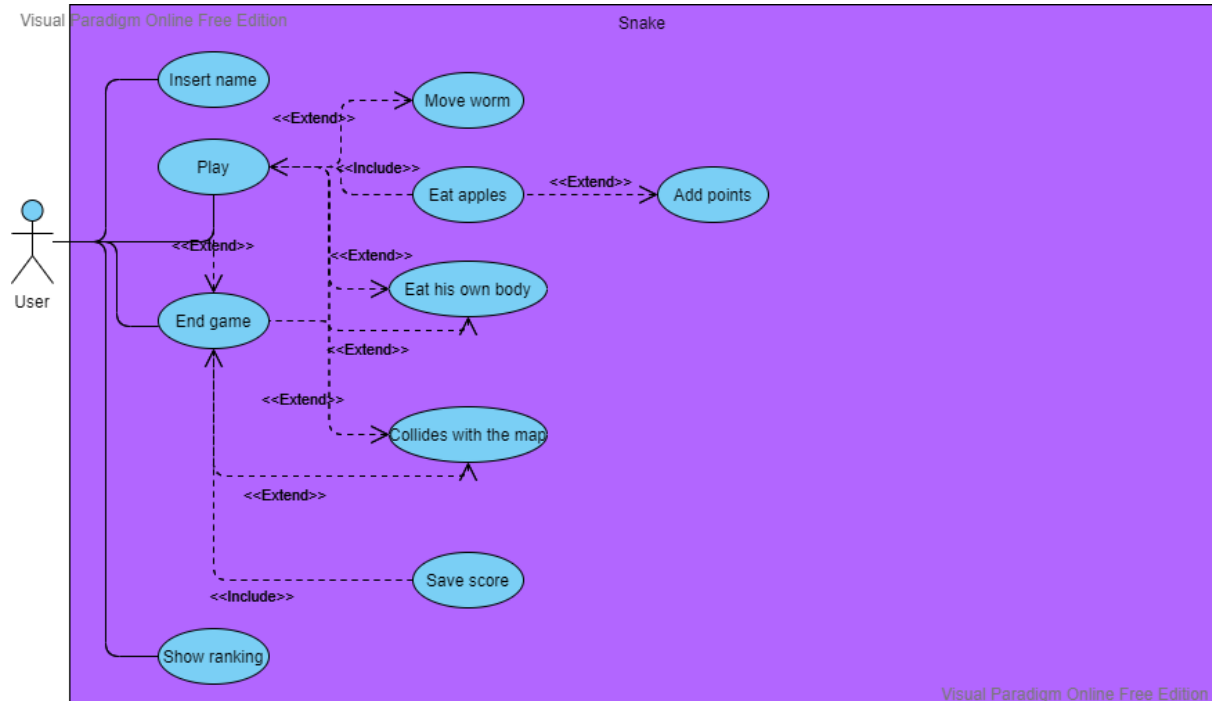
Requirements specification:

1. System requirements:
   - We need a computer to play this game.
2. Functional requirements:
   - User:
     - ➢ The user can insert his name before pressing the play button.
     - ➢ The user can move the worm around the map with the movement keys.
   - System:
     - ➢ When the worm eats one apple the system adds points to the score.
     - ➢ The system checks if there is a collision with the map or worm body if so, the game ends.
     - ➢ The system saves the score with his name when the game finishes.
     - ➢ The system shows the credits.
     - ➢ The system shows the welcome message with a ranking with the best scores and his names.
3. Non-Functional requirements:
   - The game must be simple to play.

Class Diagram

Snake

-Window[] scenes

1

Worm

+List<Sprite> worm

+controler()
+addBody()

1

3..N

Welcome

+void draw()
+Welcome()

Credits

+void draw()
+Credits()

Game

-Worm worm
-Image background
+String backgound
+String backGSound

+void draw()
+Game()

1

1

Head

-String asset

Body

-String asset

<<Abstract>>Window

+int width
+int height
-StackPane root
#GraphicsContext gc
#Set<KeyCode> activeKeys
#Set<KeyCode> releasedKeys
#MediaPlayer mp
#Media sound

+GeneralScene()
+abstract void draw()

0..N

Apple

-String asset

Sprite

#Image image
#int x
#int y

+static void draw()
+static boolean colision(Sprite sprite)

Scene FX

Case Diagram

Snake

Insert name

Move worm

<<Extend>>

Play

<<Include>>

Eat apples

<<Extend>>

Add points

<<Extend>>

User

<<Extend>>

Eat his own body

End game

<<Extend>>

<<Extend>>

Collides with the map

<<Extend>>

Save score

<<Extend>>

<<Include>>

Show ranking

Activity Diagram

Snake

Play

Move worm

No

Yes

eat apple

Add points

Yes

No

Collision with oun body
or the map limit

Show end message
and his points

Yes

No

His points its better than
the others in the ranking

Check position

Insert the points
with his name

Show the credits