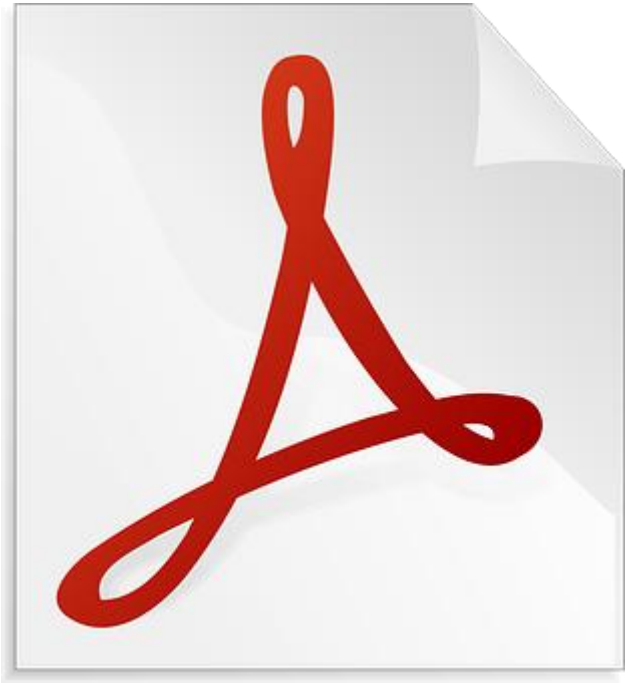
Lecture

Intro to the Scenario

Scenario

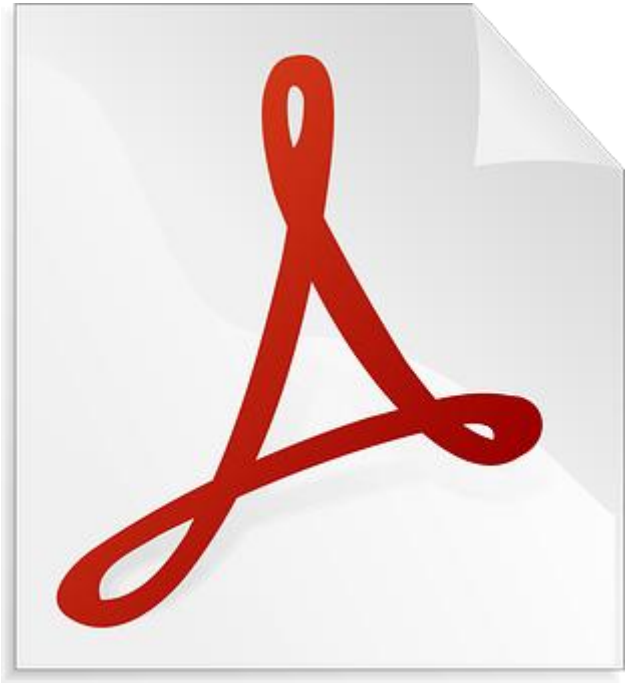
Scenario



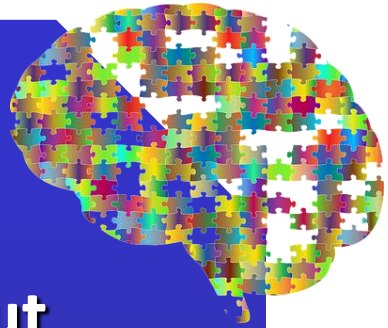
OO Analysis – Design a Videogame

Scenario

Scenario

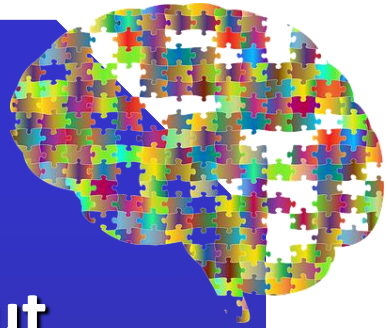


OOP Analysis – Design a Videogame



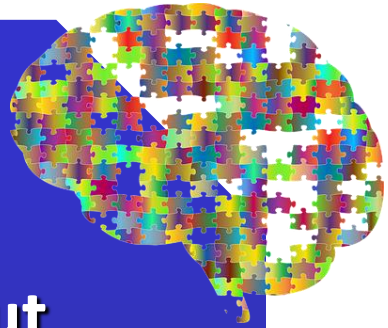
Let's think about...

Classes



Let's think about...

Attributes

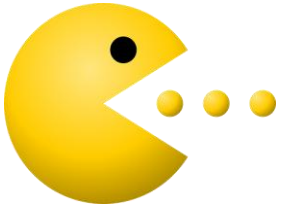


Let’s think about...

Methods

Scenario

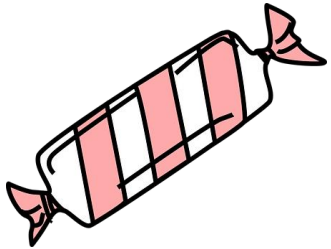
Player



- The player has to be able to move up, move down, move left, and move right as long as it is not beyond the boundaries of the window (0, 450) both horizontally and vertically.
- The player initially has 10 lives and it displays a welcome message when the game starts.
- The player has a specific character assigned.
- The player is able to shoot candy. This candy acts like a bullet.

Scenario

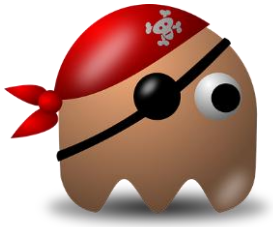
Candy



- The player is able to shoot candy.
- Candy acts like a bullet in the game. It moves either horizontally or vertically. This is determined when the instance is created.
- The speed of the candy has to be a specific number within a range from 5 to 45.

Scenario

Enemy

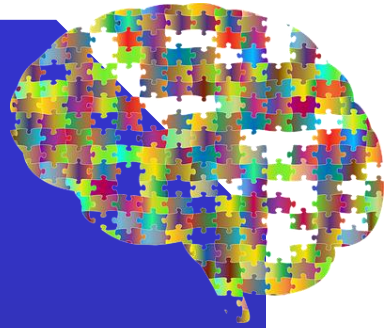


- Enemies are created at random locations, so their initial x coordinates and y coordinates are randomly generated integers in a range from 0 to 450.
- Enemies have a fixed direction of movement (vertical or horizontal).
- When an enemy reaches the end of the screen (0 or 450 vertically or horizontally), it changes direction (if the previous direction was vertical, it will now move horizontally and vice versa).
- The speed of the enemies depends on the difficulty of the game selected by the human player, and it is determined when the instances are created.
- Enemies initially have 15 lives.

Scenario

Other

- When a player collides with an enemy, the player loses one life.
- When the candy shot by the player hits an enemy, the enemy loses one life.



Think about...

This Scenario

Classes