
Space Invaders – CA2

Classes:

There are 5 classes in my game – `Game()`, `Player()`, `Bullet()`, `Enemy()` and `genAliens()`

The `Game()` class is obviously the main class which has one instance. This class's `init` function defines all the important game mechanics and also contains the main `playGame()` method. This method is the starting point for every other function call.

The `Player()` class keeps track of the player position on the x-axis, and several methods work to handle any key presses made by the user.

The `Bullet()` class is for instantiating a fired bullet within the game and the `draw()` method draws the instance onto the display.

The `Enemy()` class is for instantiating each enemy that appear in rows from the top of the screen. Several methods work to give the appearance of movement while a `collision()` and `checkBoundary()` method check for any events that will interrupt the game flow.

How it works:

The main `playGame()` method is called at the bottom of the program. A single instance of `Player()` is made to initialise the user and also the generator method is called to trigger the first row of enemies to spawn. Next, an infinite loop is entered which will simulate the framerate. Several conditional statements check for any user input in the form of keypresses while another method checks that the player isn't breaching the boundary of the screen. Another conditional statement checks for to see if enough time as passed to move the enemies. If so, the position of the enemies is checked, and the appropriate movement is applied. The next phase is the drawing where everything is blit to the display and any new positions will be seen while any collisions detected will either end the game or modify what is on the screen.