In the game, "Space Arcade," you control a spaceship and your objective is to survive and defeat enemies while collecting gems

In the code:

Initializing and setting up the Game Window:

The code sets up the display window with a width and height using Pygame. It also loads images, sounds, and music used in the game.

Ship Class:

This class represents the player's ship. It has attributes such as position (x, y), health, ship image, laser image, a list of lasers, and a cooldown counter .The ship can be drawn on the game window and can move.

It can shoot lasers, which are also represented as objects.

Laser Class:

This class represents the lasers shot by the ship or enemies. It has attributes like position (x, y), laser image, and a mask for collision detection. The laser can be drawn on the game window, move upwards, and check if it's off the screen or colliding with other objects.

Enemy Class (Inherited from Ship Class):

This class represents the enemies in the game, which are inherited from the Ship class. It has additional attributes specific to enemies, such as an enemy image. Enemies can move, shoot lasers, and have collision detection with the player's ship.

Gem Class:

This class represents gems that the player can collect for points. It has attributes like position (x, y), velocity, gem image, and a mask for collision detection. Gems can move downwards, be drawn on the game window, and have collision detection with the player's ship.

File Handling for High Score:

The code includes functions to load and update the highest score from a file.

Main Function:

This function is the entry point of the game and contains the game loop. It initializes variables like the player, enemies, gems, level, lives, and score. Inside the game loop, it handles user input, updates game objects, checks collisions, and manages game states.

The game window is continuously redrawn based on the state of the game. When the game ends (player loses), the highest score is updated.

Main Menu Function:

This function is responsible for displaying the main menu of the game. It shows a title label on the screen. If the user clicks the mouse button, it starts the game by calling the main() function.

WORKING:

The game starts with a main menu screen displaying the title "Let the BATTLE begin...".

When you click the mouse button, the game begins. The player spaceship appears at the bottom of the screen, and you can control it using the arrow keys: left, right, up, and down.

The player spaceship has a health bar displayed as a numerical value

.Enemies in the form of spaceships start appearing from the top of the screen and move downward. The enemies can shoot lasers at the player.

The player can shoot lasers by pressing the spacebar key. The lasers travel upward and can destroy enemies upon collision.

The player's score increases when an enemy is destroyed.

If the player's spaceship collides with an enemy spaceship, the player loses health.

The game continues until the player's health reaches zero or the player closes the game window.

If the player's health reaches zero or the player closes the game window, a "You Lost!" message is displayed on the screen.