Forman Christian College

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COMP 111 C

Project Phase 1

UML Diagram & Documentation

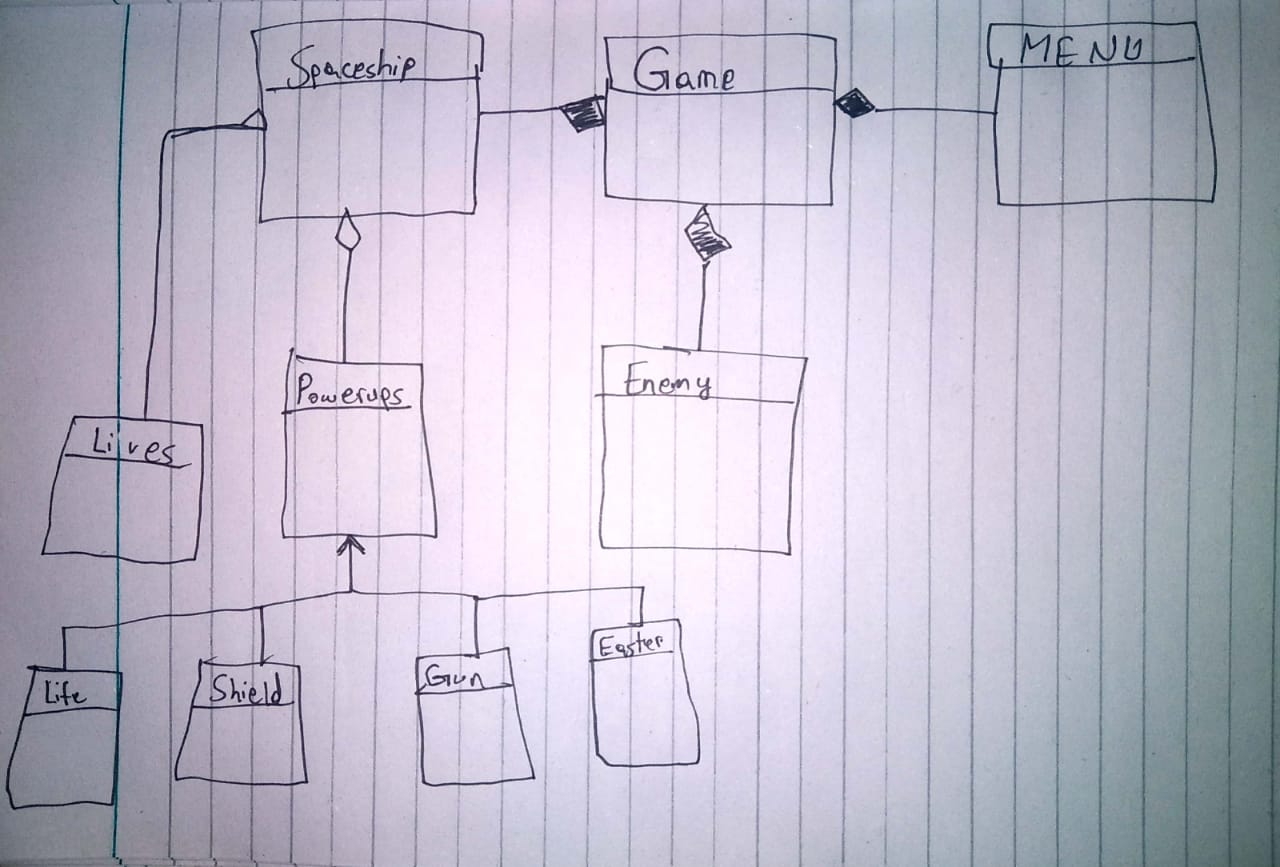
**Description:**

‘Space Shooter’ will be implemented using basic OOP concepts via the pygame library. The goal of the game would be to avoid the incoming asteroids and destroy them whenever the player picks up the “Gun” ability. The more asteroids you avoid, the more points you score. The player will have his own spaceship using which he will avoid the oncoming asteroids. Abilities and power-ups such as an extra life, a shield and a gun will be available for short periods of time throughout the gameplay.

**Implementation:**

* Game class (This class is the main class which will create the menu, player and enemy objects)
* Menu class (An object of this class will display a menu with options such as start game, quit game, display game instructions and display highscores)
* Spaceship class (This is the player class. An object of this class will be a controllable spaceship which the player can control to avoid asteroids)
  + Lives (This class is responsible for the initialization of the player’s lives, as soon as the player runs out of lives, the game ends.)
  + Powerups (This is the parent class for all pickups)
    - Life (An object of this class will be a heart shaped pickup that can increment the player’s total lives by 1)
    - Shield (An object of this class will temporarily provide a shield to the player allowing the player to not lose a life when an asteroid hits the spaceship)
    - Gun (An object of this class will be a pistol shaped pickup which will shoot out bullets to destroy asteroids for a short period of time)
    - Easter Egg [An object of this class will be responsible for something fun ; ) ]
* Enemy class (Objects of this class will be asteroids that, upon contact, decrement the player’s lives by 1)

**UML Diagram:**

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