TED ÜNİVERSİTESİ

CMPE211 DESIGN REPORT
SPACE INVADERS GAME PROJECT

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Space Invaders is an arcade game played with only one player. Player can control a spaceship that can shoot bullets. There are invaders and they can shoot player's spaceship. The main aim of the game is to shoot the invaders with bullets. Player gets points for each invader they kill.

MAIN CLASS:

This is our main class, therefore it is relatively empty. This is going to help us run all the methods from the classes.

GAME CLASS:

This class is where the main game play code is going to be in. It is going to call methods from other classes to create the game.

CHARACTER CLASS:

This class implements the other character classes in the game: player class, invaders class, bullet class. We use three variables in this class; x, y and speed are the variables that we will be using.

PLAYER CLASS:

Player is visible as our spaceship. It can move to only left and right therefore we are using MoveLeft and MoveRight methods. It can also shoot bullets. If it is shot by invaders' bullets it disappears and loses a heart and for this action we are using the isVisible method. In total the player has 3 hearts (3 chances). After losing 3 hearts, the game ends and starts from the beginning again. We will also be using Variable and it will inherit Variable from the character class.

INVADERS CLASS:

Invaders are the enemies in this game. Within a time interval they get closer to the player, meaning they can only move up and down. This class has the methods MoveLeft, MoveRight and MoveDown for moving the invaders. Player needs to shoot them before the invaders are able to touch the spaceship otherwise the game ends. They can also shoot bullets and if the bullets touch the spaceship the game ends and the player loses a heart. If shot with a player's bullet, invaders disappear. It also has isVisible method. Variables will be inherited.

BULLET CLASS:

Bullets can be used by both invaders and the player. They can only move up and down. Within time interval these objects change places. If a bullet touches the player or any of the invaders then the object that's been touched disappears.This class has MoveUp method to shoot bullets upwards. It has isVisible method.

MAIN

GAME

CHARACTER

+ int speed

+ int x

+ int y

Extends

PLAYER

+ MoveRight
+ MoveLeft
+ boolean isVisible

INVADER

+ MoveRight
+ MoveLeft
+ boolean isVisible
+ MoveDown

BULLET

+ MoveUp
+ boolean isVisible