

Team GSJ

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CSCI 205 Final Project

Frogger CRC Cards

### Class: Frog

Responsibilities:

- looks like a frog using a frog image
- set size of frog
- set starting position of frog
- knows its location
- can change its location
- knows its size
- can get on waterObject
- knows if it is on a water object
- can restart to bottom of the screen
- can move to a new level

Collaborators:

- ImageView

### Class: MovingObject

Responsibilities:

- set height and width
- set starting x and y positions
- show up on screen
- move
- create path
- create path transition
- knows the path
- knows the path end
- knows its size
- knows its location

Collaborators:

- Path
- PathTransition

## Class: River

### Responsibilities:

- add movingObject to the river
- remove water objects from the road
- Knows current number of water objects on the river
- knows the water objects in the river
- knows which direction the objects move

### Collaborators:

- movingObject

## Class: FroggerModel

### Responsibilities:

- create all car paths for the game
- create all waterobject paths for the game
- creates all lily pads for the game

### Collaborators:

- LilyPad
- WaterObjectParh
- CarPath

## Class: FroggerController

### Responsibilities:

- connect view and model
- updates frog position when keys are pressed (up, down, left, right)
- bounds the frog to the bounds of the pane
- starts the movement of the cars and waterobjects
- checks for collisions of the frog and cars/water objects
- restarts frog when collisions occur and takes away one life
- ends game when all lives are gone

### Collaborators:

- FroggerView
- FroggerModel

## Class: FroggerMain

### Responsibilities:

- creates frogger model, view, and controller
- creates scene
- updates the GUI
- handles when the keys are pressed to move the frog
- launch GUI

### Collaborators:

- FroggerController
- FroggerView
- FroggerModel

## Class: FroggerView

### Responsibilities:

- creates the root
- adds graphical elements to screen (frog, paths, lives in corner of screen)
- adds score to GUI
- creates end screen

### Collaborators:

- Frog
- FroggerModel
- Car
- CarPath
- WaterObjectPath

## Class: LilyPad

### Responsibilities:

- creates the lilypad image
- knows whether it is occupied
- sets its position

### Collaborators:

- imageView

### Class: MainMenu

Responsibilities:

- creates opening menu
- adds level options
- adds button
- adds progress bar
- starts game

Collaborators:

- FroggerModel

### Class: HighScores

Responsibilities:

- retrieves high scores
- sets high scores
- returns high scores

Collaborators:

- highScores.txt