Pacman-Killer Opengl 2D Game

This game is based on [Jetpack Joyride](#). More details in [problem.pdf](#).

The prime objective is to score as much as possible. After a certain amount of time, a villain appears who needs to be defeated. In order to reach the villain we have avoid a number of obstacles.

Installation

You need to install the development packages of the following libraries:

1. GLEW

2. GLFW3

3. GLM

Installing packages

```
sudo apt install cmake pkg-config

sudo apt install libglew-dev libglfw3-dev libglm-dev
   sudo apt install libao-dev libmpg123-dev
```

Run the code

```
cd path/to/project

mkdir build

cd build

cmake ..

   #     Run from here after
   editing make

./graphics_assign1
```

Extra Features

- Infinite boundary

- Score

- Moving player using keyboard

    Variable Game Speed

    Background made with hexagons

    Modular codebase

    Physics have been followed

    Random motion of flying balls and magnet

World

1. **Flying Coins** - They have random velocity, random color. If player hits the coin, coin disappears and player's score increases by 5.

2. **Powerups** -There are 2 kinds of powerups, One which increases the score and one which gives a speed boost.

3. **Firelines**- Lines of fire appear at random angles which need to be avoided. -5 if collision occurs.

4. **FireBeams**- Fire Beams move periodically on y-axis. -5 if touched.

5. **Magnet** - Magnet causes a constant attractive force in its direction.

6. **Water Balloons**- Can be used to extinguish the firelines.

7. **Semi-circular RIng**- Forces the player to move in a semicircular fashion when touched.

Score is displayed on **top right** of window.

Scoring

Collision with normal coin : +5

Collision with special flying coin : +10

Collision with firelines: -5

Collision with boomerang: -1

Controls

Keyboard Controls:

<-/-> - Move Left/Right

Up Arrow - Jump
F - shoot superman

Space - water balls.

S - Shield.

Mouse Controls:

Mousewheel - Zoom In/Out