COP 290 - Assignment 1
Screensaver of N balls

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1   Implementation

In this app, 'we are implementing a 3-D Screensaver consisting of N balls. The software required for running the app are:

- `g++`

- `Open-GL Libraries(Free-glut)`

- `p-threads library on C++`

2   How to Use

2.1   Start the app

In order to run the Screensaver for first time, type the command `make execute num_threads=n` in Linux terminal after changing to project directory, where **n** *
denotes the number of balls.
  * The maximum number of balls allowed is 30

If you want to execute it again, first remove `execute` and `compile` files from the project, using `rm execute compile` and again run `make execute num_thread=n`.

2.2   Controls

During execution, various parameters can be controlled with the help of Keyboard Buttons. These include:

- `↑ and ↓ Keys` – To cycle through the balls selected for controls. Initially no ball is selected. The selected ball turns white in colour.

- `? key` – To clear the selection of balls.

- `← and → keys` – To change the velocity of selected ball. ←key for increasing and → key for decreasing velocity.

- `w and s` – To move front and back in box, i.e, in the Z direction.

- `g` -To enable gravity in the ball. Each ball will then experience an acceleration in downward direction.

- `+` – Inorder to increase the count of balls currently present on the screen. The count can only be increased till 30.

- `Space key` – To pause the app. The balls and moving terrain will be paused. Again pressing `Space` key will start the app again.