Class 15: Assignment 2 - Lists and OOP

Programming for VR I

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Last 2 classes

- Lists & OOP

This assignment

- Continue brick and paddle game
- Lists and OOP

End result

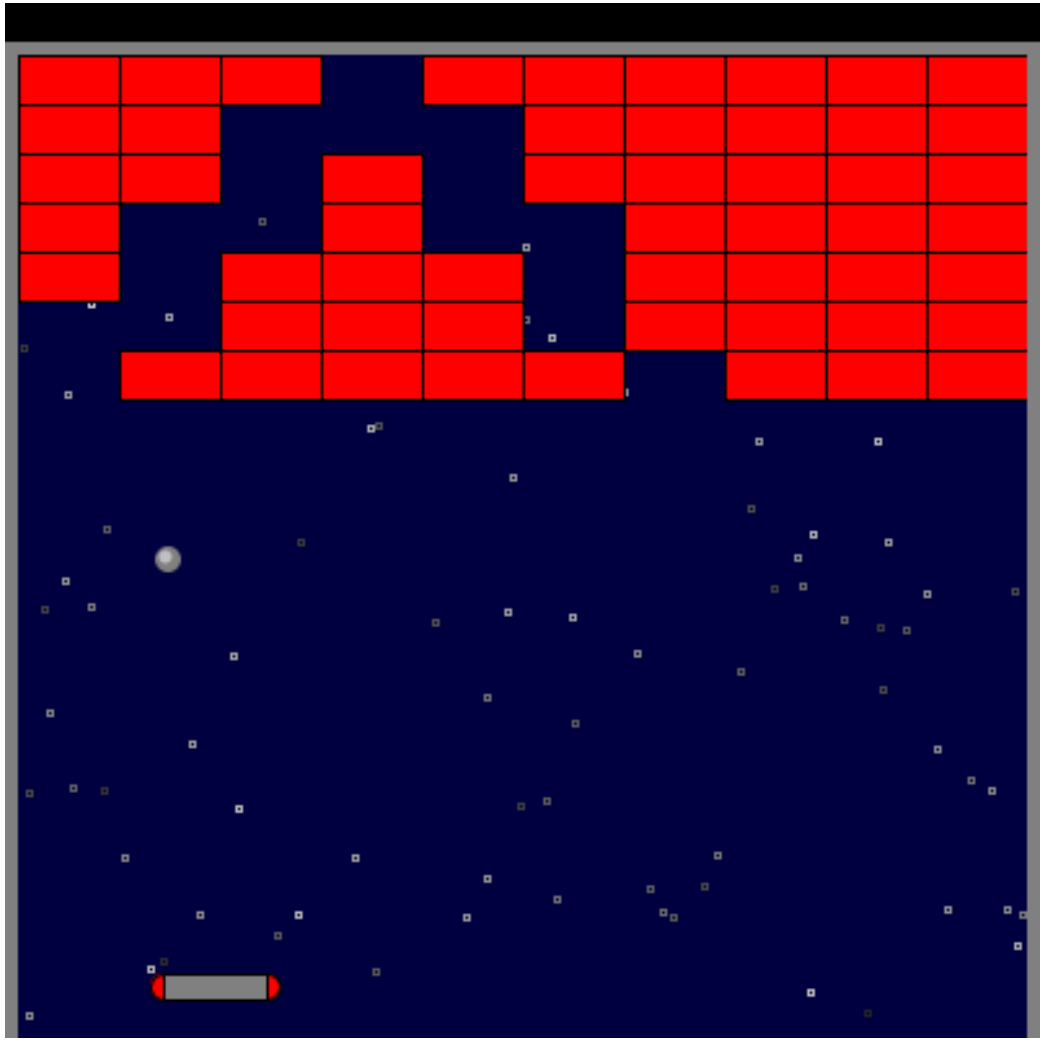

Figure 1: Cannonball model

MVP features (2 points each)

- Brick class, which draws a brick when active
- Ball class, which moves and draws itself
- Ball is dragged along paddle until launched with click or spacebar
- Cannonball physics: when ball overlaps with a brick, the brick becomes inactive. When hitting the side walls, the ball bounces
- Posted on Github

Brick class

```
class Brick:
  def __init__(self, pos_x, pos_y, w, h):
    self.pos_x = pos_x
    self.pos_y = pos_y
    self.w = w
    self.h = h
    self.active = True

  def hit_test(self, x, y):
    # Returns true if the coordinate x, y is within the brick.
    return False

  def draw(self):
    # Draws the brick on the screen
    pass
```

Ball class

```
class Ball:
    def __init__(self, pos_x, pos_y):
        self.pos_x = pos_x
        self.pos_y = pos_y
        self.speed_x = 0
        self.speed_y = 0

    def update(self):
        # updates the position of the ball according to game physics.
        pass

    def draw(self):
        # Draws the ball on the screen
        pass
```

Assignment

- Due by next Tuesday AM
- 4 teams
- (+2 points): Bonus feature of your choice

Advice

- Easier to set a brick to `active = False` then to remove it from the list.