

Astroangles

The Developmenting

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Overview



- The goal of Astroangles: solidify basic fraction education with practice!
- Opportunity to familiarize a student with “ballpark”, mental models of common angles

Gameplay

- Player is presented with an angle, in degrees
- Selects an asteroid placement that best fits that angle
 - +1 point for correct answer,
 - -1 health for incorrect answer
- After 3 incorrect answers, the game is over!

The code



- <https://github.com/jibby0/IGME582-final>
- Started with hello-world and pygame boilerplate
- Mostly pygame, with sugargame for better integration

The code: the good

```
import math

import pygame
from pygame.locals import MOUSEBUTTONUP
import colors

class Asteroid:
    def __init__(self, angle, asteroidImg):...
    # Helper functions to set things and move the asteroids
    def set_angle(self, angle):...
    def set_asteroid_pos(self, (x, y)):...
    def update(self):...
    # Checks if a point is in the asteroid
    def is_selected(self, (mouse_x, mouse_y)):...
```

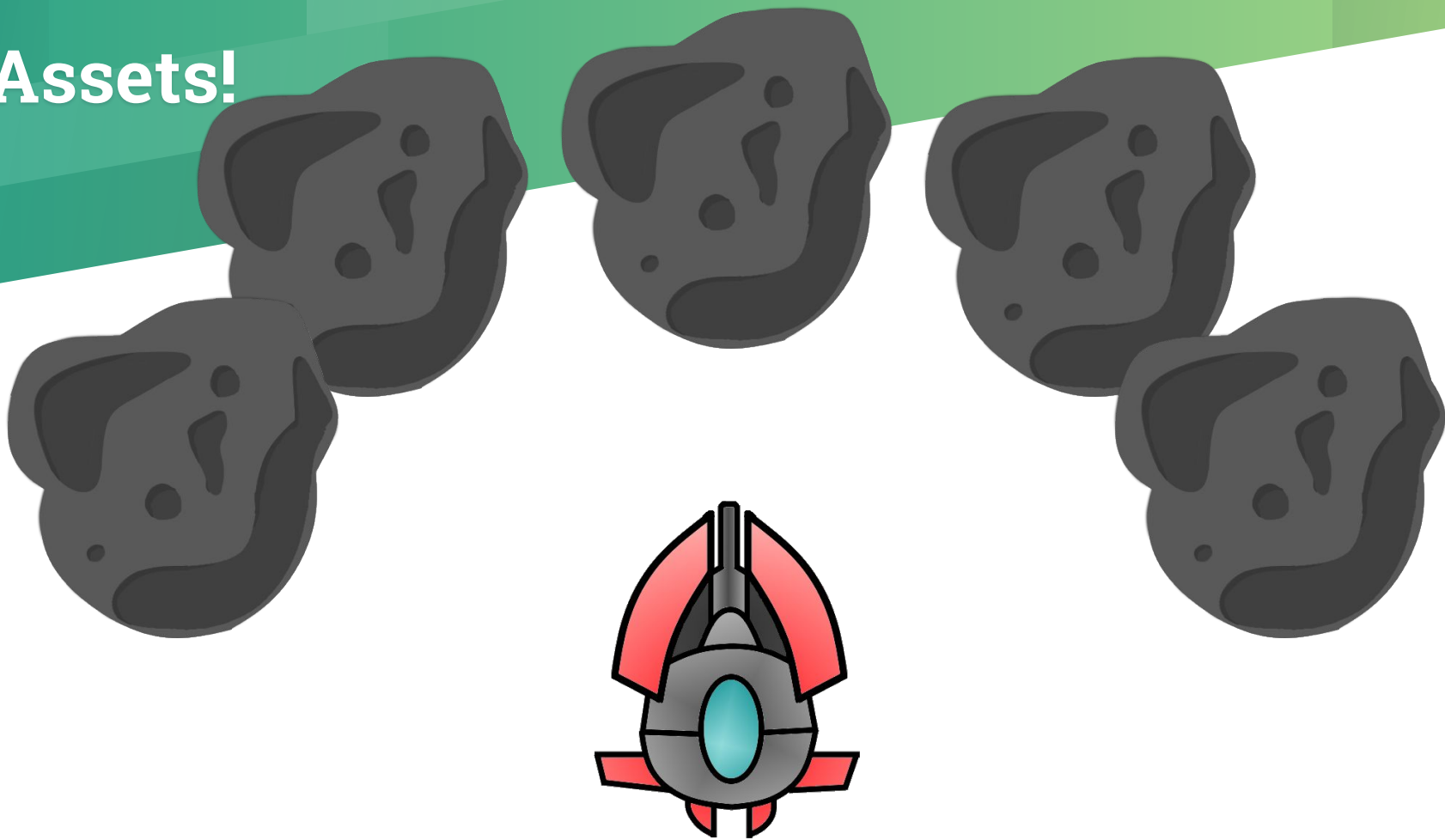
- Thankfully, most of it!
- Asteroids and helpful functions are in a separate class, not much logic in the game loop

The code: the bad

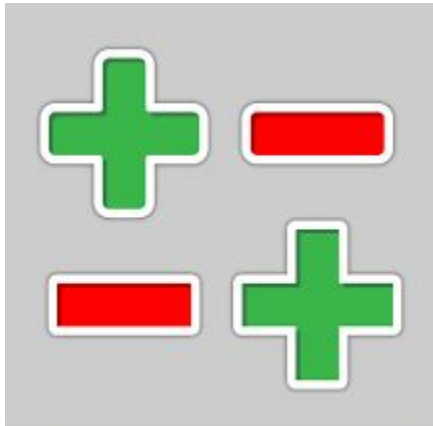
```
x = 0x00F
```

- Being unfamiliar with sugar, GTK, and pygame, code isn't the cleanest
- Variables randomly attached to the Activity object in the (large) main running loop
-

Assets!



Future additions



- Scoreboard
- Save/Load system
- Minimum distance between given asteroids. Currently 15 degrees (very small)

Questions?

Otherwise, it's demo time!