Class 8: lab assignment I

Programming for VR I

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We did so much!

- Python
- git
- basic data types
- arithmetic
- if/else
- for loops
- coordinate systems
- responding to inputs

What could we do with this?

- All the basics to control a character and draw a field

Breakout

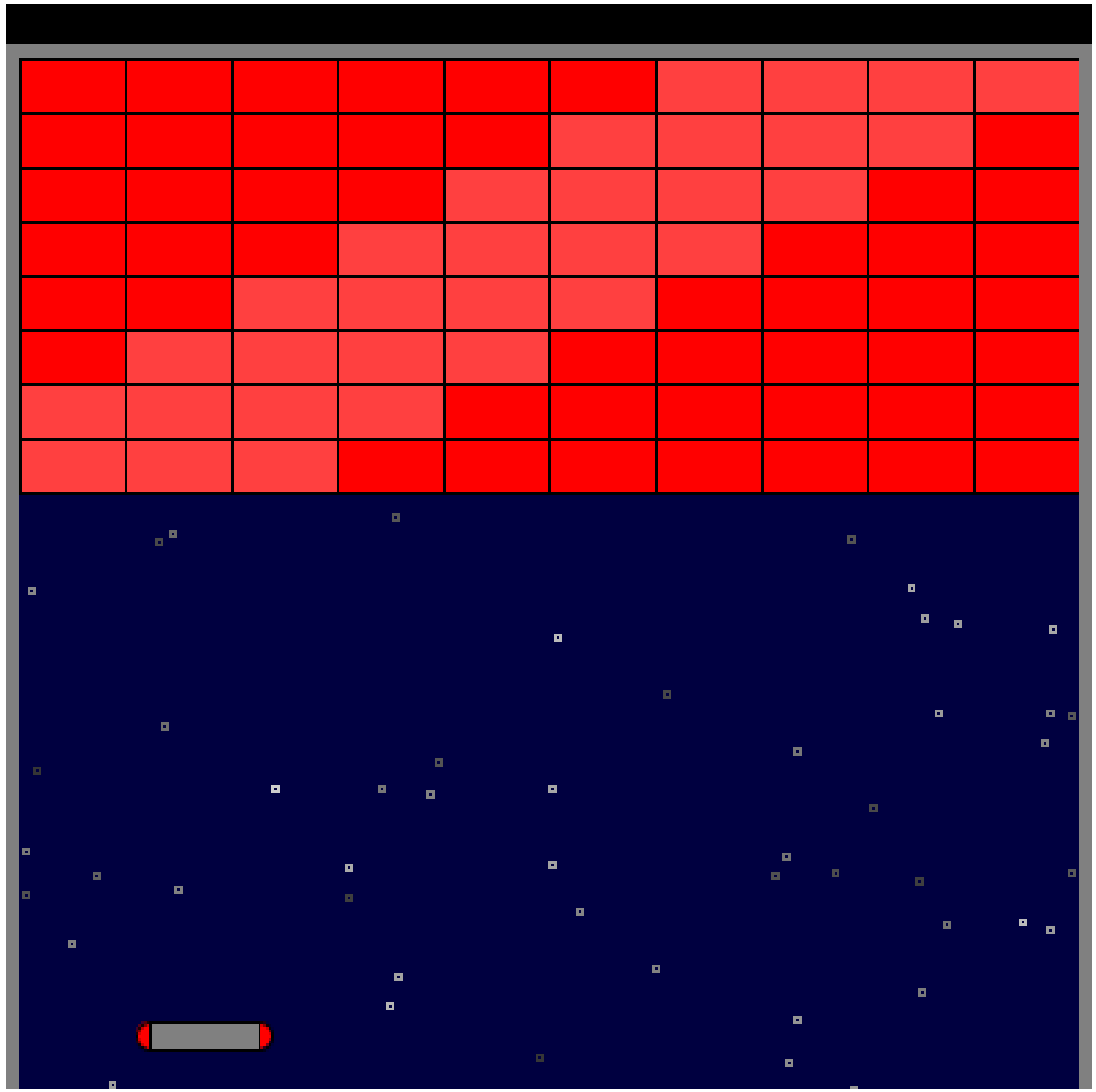

Figure 1: Breakout

Class assignment 1

- 10 points
- Teams of 4-5: make breakout
- Two periods
- 10 out of 10 points: 5 MVP features (2 points each)
- 2 out of 10 points: a feature of your choosing
- Deadline is Friday after next class (January 10th)

What is the minimum viable product (MVP)?

- Draw a paddle at the bottom of the screen with rounded sides
- Control it with both the mouse and the keyboard
- Draw bricks in a grid
- A frame around the playfield
- Code on Github

Suggested organization

- Plan how you will implement
- Pick a feature of your choosing
- Two pair programming teams working in parallel
- One for the paddle, one for the field and bricks
- Bring them together
- (time permitting) implement one of the bonus features

Standup

- What did you do?
- What will you work on?
- What obstacles do you foresee?

Feature of your choosing

- Star field
- Shiny bricks
- Sprites for the bricks and/or paddles
- Bricks draw a figure

Diagram

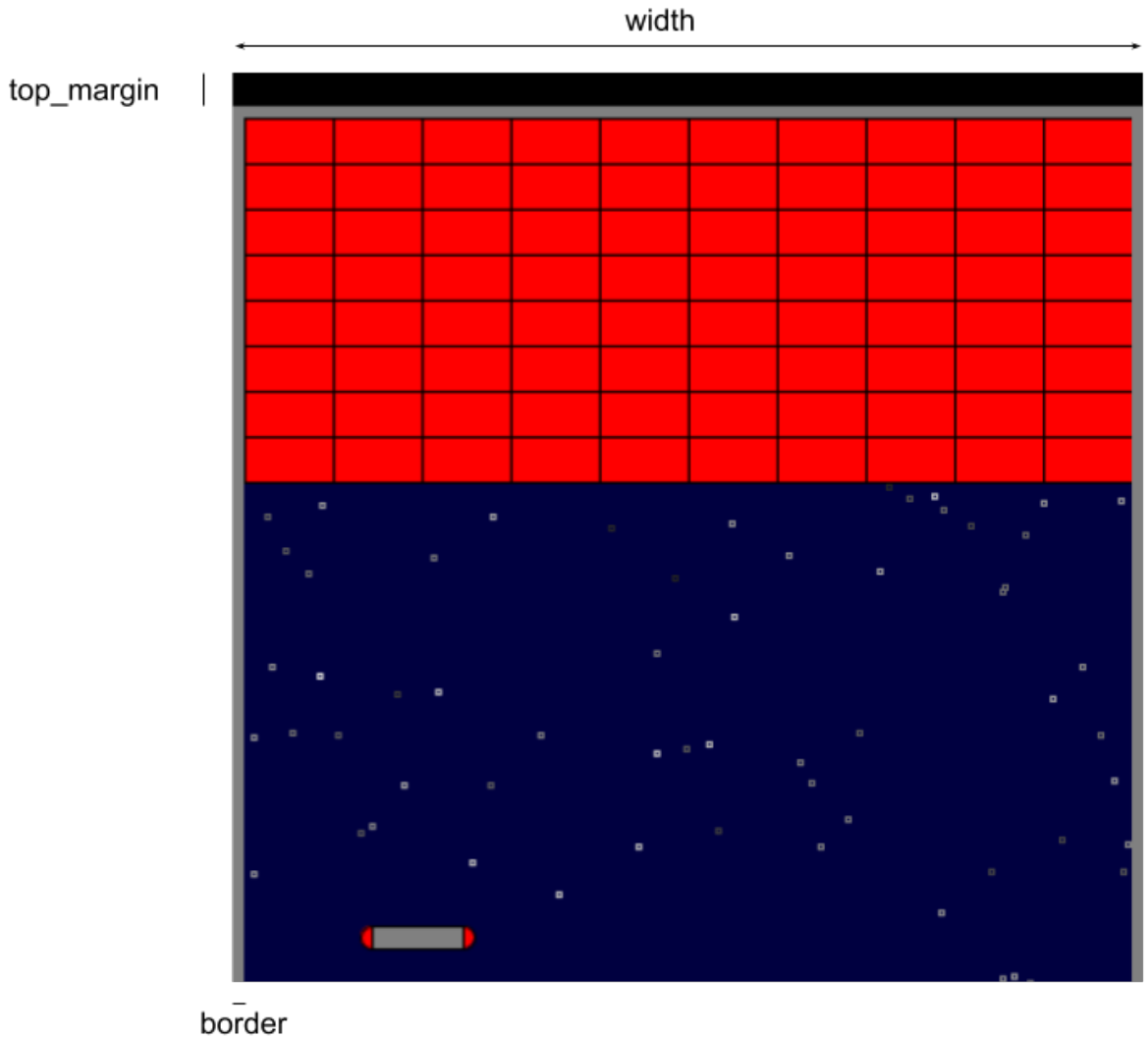

Figure 2: Coordinates

Both the mouse and keyboard

- Tricky because you don't always want the mouse to override the keyboard
- Two modes: `mouse` or `keyboard`
- If mouse moves: change into mouse mode, read mouseX
- If key is pressed: change into keyboard mode, ignore mouseX

The frame around the bricks

- Tricky because a lot of coordinates to think about
- Black margin on top for high scores eventually
- Gray border inside of that
- Dark blue field