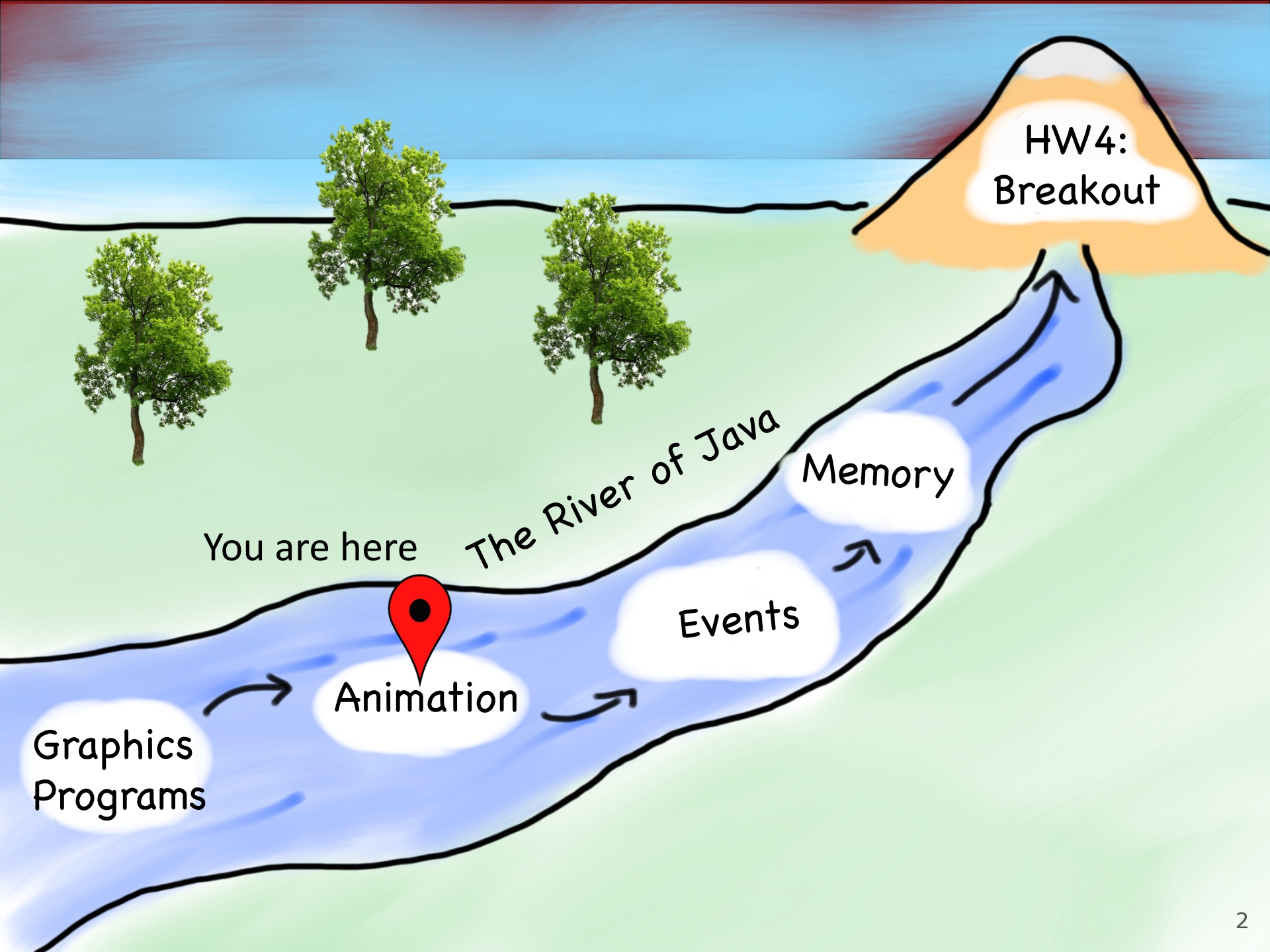
CS 106A, Lecture 13
Animation

reading:

Art & Science of Java, Ch. 9


HW4:
Breakout
The River of Java
Memory
You are here
Events
Animation
Graphics
Programs

Plan For Today

- Announcements
- Midterm
- Animation
- Practice: Animated Square
- Practice: DribbleCastle

Plan For Today

- Announcements
- Midterm
- Animation
- Practice: Animated Square
- Practice: DribbleCastle

Plan For Today

- Announcements
- Midterm
- Animation
- Practice: Animated Square
- Practice: DribbleCastle

Simple animation

- A Graphics program can be made to animate with a loop such as:

```
public void run() {
    ...
    while (test) {
        update the position of shapes;
        pause(milliseconds);
    }

}
```

- The best number of ms to pause depends on the program.
  - most video games ~= 50 frames/sec = 25ms pause

Graphical methods

- These methods in graphical objects can be useful for animation:

Method	Description
`obj.getX()`	the left *x*-coordinate of the shape
`obj.getY()`	the top *y*-coordinate of the shape
`obj.getWidth()`	number of pixels wide the shape is
`obj.getHeight()`	number of pixels tall the shape is
`obj.move(dx, dy);`	adjusts location by the given amount
`obj.setLocation(x, y);`	change the object's x/y position
`obj.setSize(w, h);`	change the object's width*height size

- The `GraphicsProgram` itself has these methods, too:

`getWidth()`	number of pixels wide the window is
`getHeight()`	number of pixels tall the window is
`setCanvasSize(w, h)`	change the canvas's width*height size

Plan For Today

- Announcements
- Midterm
- Animation
- Practice: Animated Square
- Practice: DribbleCastle

Recap

- Announcements
- Midterm
- Animation
- Practice: Animated Square
- Practice: DribbleCastle

Next Time: Interactive Graphics Programs