Final Projects

Lecture 22
Common Mistakes (1/3)

• The location of a shape in an array/ArrayList does not directly impact the graphical location of the shape.
  o you still must call the setX/Y (or similar) method of the shape
  o arrays/ArrayList are used to handle logical containment, not graphical containment
Common Mistakes (2/3)

• When arrays are created, they hold nothing. They store the default value for the type which is stored by the array
  - `null` for objects
  - `false` for `boolean`
  - `0` for `int`
Common Mistakes (3/3)

• Don’t instantiate a Pane in your Doodle class or equivalent

• Remember to stop the Timeline and remove KeyEventHandler once your game ends.

• Use the right method to add Nodes to the SceneGraph
  o use `.getChildren().add(...)` when you are adding one Node
  o use `.getChildren().addAll(...)` when you are adding multiple Nodes
CS15 Final Projects

• Sketchy
• Othello
• Pacman
• Indy
Sketchy

GUYS, IT’S NOT WORKING!!
Some info

• Build an application which let’s you make art

• Manipulate shapes (fill color, resize, rotate, etc.)

• Draw lines

• Layer shapes

• Undo/Redo

• File saving and loading
Top 5 Reasons To Do Sketchy (1/5)

I’m sorry, was one lame arcade game not good enough for you?
Top 5 Reasons To Do Sketchy (2/5)

We liked Indy before it was cool
Top 5 Reasons To Do Sketchy (3/5)

Because color is a *spectrum* and not a binary

(**cough cough** Othello)
Top 5 Reasons To Do Sketchy (4/5)

Adobe Photoshop = $653.97

Windows Paint = $98.20

Sketchy = ~priceless~
Top 5 Reasons To Do Sketchy (5/5)

YOU get to decide who’s on top ;)

Othello
Some info

• Othello is a two-player simple strategy board game also known as reversi

• You learn how to create your own Artificial Intelligence (AI) program that can play a human user or another AI

• You have lots of ~ fun ~ with recursion and making an interactive GUI
Video

Video: our video link goes here
Top 5 Reasons To Do Othello (1/5)

Because Pacman is basic af
Top 5 Reasons To Do Othello (2/5)

All the best, smartest, sexiest, and happiest 15 alums did Othello
Top 5 Reasons To Do Othello (3/5)

Andy hates all the other projects (fact)
Top 5 Reasons To Do Othello (4/5)

Every TA who did Othello for their final project is now a TA for CS15
Top 5 Reasons To Do Othello (5/5)

Eventually, the world will be taken over by robots, and you’re more likely to survive that if learn how to program our AI overlords
Demos!
Pacman

• Super rad arcade game

• Write an AI for the Ghosts by implementing a Breadth-First Search algorithm

• Play against said ghosts as you “test your game”

• Opportunities for fun extra credit like fruit and extra levels!
Top 5 Reasons To Do Pacman (1/5)

Even the other TA’s like Pacman best:

“I’m a Pacman TA at heart”
– Asher, Sketchy TA
Top 5 Reasons To Do Pacman (2/5)

They call Pacman “the Holy Grail of Video Games”
Top 5 Reasons To Do Pacman (3/5)

Nomnomnomnomnom
Top 5 Reasons To Do Pacman (4/5)

You get to join the Super Pac
Top 5 Reasons To Do Pacman (5/5)

Even Shakespeare doesn’t like Othello
Relevant Information

- All you need is
  - appropriate length (e.g. not LiteBrite)
  - use a data structure
  - use an algorithm (like Tetris’s line clearing etc.)
  - originality

- The possibilities are endless!
Top 5 Reasons To Do Indy (1/5)

All the other TA's smell bad
You can hang out with Ruby and have crepes with her at TA hours
Top 5 Reasons To Do Indy (3/5)

You can tell people you're Indiana Jones
Nick will hold TA hours for you in a cardboard box
Top 5 Reasons To Do Indy (5/5)

You won't have to go to TA hours in the Fishbowl and we won't make you use SignMeUp ever again.
Top 5 Reasons To Do Indy (6/5)

We won't make you include a "game over" label.
Wesley will hold TA hours dressed as Troy's dad or as Andy...your choice
Demos
Important Information

If you are interested in doing Indy, you should

1. come to the Indy Info session on Thursday at 4PM in CIT 477
   - there will be cookies!

2. find a “backup” Final Project that you’ll do in case your project doesn’t get approved
   - you should go to your backup’s Help Session, just in case
Announcements

• Tetris deadlines
  o early handin: Friday, November 20 @ 10:00pm
  o on-time handin: Sunday, November 22 @11:59pm
  o late handin: Tuesday, November 24 @ 10:00pm

• Lab 9 has been released – this is the last lab for CS15
  o the latest time to get checked off is at TA hours on Thursday Dec. 3