Prof. Susan Rodger
Announcements

- Assignment 4 due Thursday Oct 28
- Videos and online quiz for next class
Pig and Panda arrays

- Two arrays, animals are in the arrays from left to right as seen
Review 1 - What is the code for?

- Code for Pigs to turn right one pig at a time?
Review 1 – What is the code for?

• Code for Pigs to turn right one pig at a time?
  – Use a “for each in” loop
  – Name a loop variable – I chose `onePig`
Review2 – What is the code for?

• Code for Pandas to bow \textbf{at the same time}
  (turn forward a little, then turn backward)?
Review 2 – What is the code for?

• Code for Pandas to bow at the same time (turn forward a little, then turn backward)?
  – Use “each in together” loop
  – Name a loop variable – I chose onePanda
Q1 – Questions about variables

• What is the difference between a const variable and a variable?

• Which Alice construct do you use to change a variable?
Q1 – Questions about variables

• What is the difference between a const variable and a variable?
  – Const variable can only store one value when it is created
  – Variable can store a value that can change

• Which Alice construct do you use to change a variable?
  – Assign tile
Q2 - What is the output of this code?
Q2 - What is the output of this code?

- Pig says: 3
Q3 -- Consider this code. Why isn’t somenum a choice?
Q3 – Consider this code. Why isn’t `someNum` a choice?

- It is not in scope! It is not in the do in order!
Pig and Panda arrays again

- Two arrays, animals are in the arrays from left to right as seen
Q4 – How do I write an array index loop to have each pig turn right once?

- *Fill in the missing code:*
Q4 – How do I write an **array index loop** to have each pig turn right once?

- **Use a count loop**
  - Create a variable set to 0
  - Use the variable to index in the array
  - Update the variable by 1 in the loop
Q4 – How do I write an **array index loop** to have each pig turn right once?

- **Or could use a for each in loop**
  - Create a variable set to 0
  - Use the variable to index in the array
  - Update the variable by 1 in the loop
Q4 – How do I write an **array index loop** to have each pig turn right once?

- **OR could use a while loop**
  - Create a variable set to 0
  - Use the variable to index in the array
  - Update the variable by 1 in the loop
Q5 – How do I write code to have each pig turn right once one at a time, with one of the pandas turning with each pig?

- Fill in missing code:
Q5 – How do I write code to have each pig turn right once one at a time, with one of the pandas turning with each pig?

• Use any type of array index loop
Q5 continued

• Notice the pigs and pandas arrays must be the same size for this to work!
Q6 – What does this code do?
Q6 – What does this code do?

• each pig moves up and down one at a time with the next pig moving one unit more. That is, the first pig 0 units, second pig 1 unit, third pig 2 units, etc.
Q6 – What does this code do?

- NOTE: Use an array index loop in two places
  - One for index, one for how far to move up/down
Q7 – How do you write code to color every other panda green in array?

• Start with no color

• Color every other green (1\textsuperscript{st} one, 3\textsuperscript{rd} one, etc.)
Q7 – How do you write code to color every other panda green in array?

- What is the missing line of code?
Q7 – How do you write code to color every other panda green in array?

- One way, use array index, increment by 2
- Must use while loop, doesn’t work w/count loop
Another possible way?
How do you write code to color every other panda green in array?

- Another way? Does this work?
How do you write code to color every other panda green in array?

• Another way? Does this work?

NO! Does this:
How do you write code to color every other panda green in array?

- **Correct Code** – update someIndex
Class Today

• Array of penguins

That is every other penguin in the array