CompSci 94
Variables and Array Indexing
March 7, 2019

Prof. Susan Rodger
Arrays given

- Two arrays, animals are in the arrays from left to right as seen
Q1 – What is the code for?

• Code for Pigs to turn right one pig at a time?
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• Code for Pigs to turn right one pig at a time?
  – Use a “for each in” loop
  – Name a loop variable – I chose onePig
Q2 – What is the code for?

- Code for Pandas to bow at the same time (turn forward a little, then turn backward)?
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• 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
Q3 – 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
Q3 – 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
Q4 - What is the output of this code?
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- Pig says: 3
Q5 – Consider this code. Why isn’t somenum a choice?
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- It is not in scope! It is not in the do in order!
Q6 – How do I write an array index loop to have each pig turn right once?
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- **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
Q6 – 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
Q6 – 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
Q7 – 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?
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- Use any type of array index loop
Q7 continued

- Notice the pigs and pandas arrays must be the same size for this to work!
Q8 – How do you write code to get each pig to move up and down, the first pig 0 units, second pig 1 unit, third pig 2 units, etc.
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- Use an array index loop
Announcements

• Assignment 5 out
• Videos and online quiz for week after spring break
Class Today

- Array of penguins

That is every other penguin in the array