CompSci 94
Review: Sample Exam Questions
February 14, 2019

Prof. Susan Rodger
Consider Mystery Procedure
What happens when this code runs?

• Panda says:
Rewrite Fall 2018 Quest. 12

```
declare procedure mystery2
with parameters:  
DecimalNumber = value, DecimalNumber = amount
```

```
do in order
if EITHER value > 3.0 OR amount < 1.0 is true then
  if value > amount is true then
    this say 1 add detail
  else
    this say 2 add detail
else
  this say 2 add detail
else
  if BOTH value > 2.0 AND value > amount is true then
    this say 3 add detail
  else
    this say 4 add detail
```
What happens when this runs?

- Panda says:
Rewritten Spring 2018 Question 14

- Assume there are three objects in an Alice world, a panda, a bunny and a tortoise and they are floating in the air, one on top of another. Complete the panda procedure called creatureAbove that has two Biped parameters, one named friend1 and one named friend2. This procedure has the animal that is highest say they are the highest. In the picture on the left, when this procedure is called with friend1 as bunny and friend2 as tortoise, the panda says I am highest. In the picture on the right when this procedure is called with the same arguments, the tortoise says I am the highest.
Write the procedure creatureAbove

```
declare procedure creatureAbove with parameters: Biped friend1, Biped friend2
```
Rewritten Fall 2018 Quest. 15

• Assume there are four objects in an Alice world, a mapinguari, a bunny, a panda, and a blackCat (shown in that order left to right below) all facing the camera. Complete the following bunny procedure called fitBetween that has two Biped parameters, one named friend, and one named object. This procedure has the object say “I can fit between” if the object can “fit between”, or stand between bunny and friend, while the object is also facing the camera, and says “I cannot fit between” otherwise.

• Hint: Note that the “distanceTo” function measures the distance between two objects from the center of their bodies, the bottom double arrow below. You want to measure the distance between them, the top double arrow below.
Write bunny.fitbetween

```plaintext
declare procedure fitBetween
with parameters: Biped, friend, Biped, object
```

CompSci 94 Spring 2019
Calls to bunny.fitBetween

• Call to ask if the mapinguari can fit between the bunny and panda

• Call to ask if the blackCat can fit between the bunny and panda

• Call to ask if the mapinguari can fit between the bunny and blackCat