

CompSci 94

Undetermined Repetition with While loop

October 10, 2024



Prof. Susan Rodger

CompSci 94 Fall 2024

1

Announcements

- Enjoy Fall Break!
- QZ13 and videos for Thursday, Oct 17
- Assignment 4 out next time
- Exam 2 is October 24
 - Study materials put on 10/24 date

CompSci 94 Fall 2024

2

Looping – exact number of times

- Count loop



- How many steps to get to the panda?
 - 3, 6, 8?

CompSci 94 Fall 2024

11

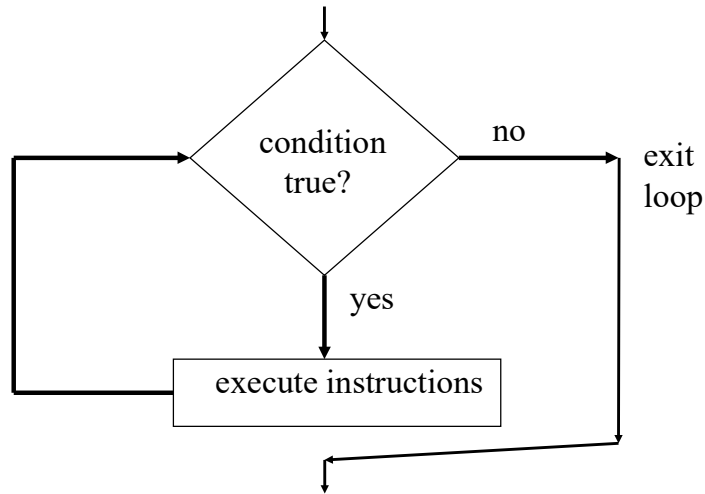
Repetition

- Sometimes don't know exactly how many times a set of instructions are repeated.
- Stopping is based on a condition
- Example:
 - Game of Chess, how many moves until win
 - Stop: when markers are in check mate position
- Indefinite Repetition
 - Where number of repetitions not known in advance
 - Use **while** statement

CompSci 94 Fall 2024

12

While statement



- While some condition is true
 - execute instructions

CompSci 94 Fall 2024

13

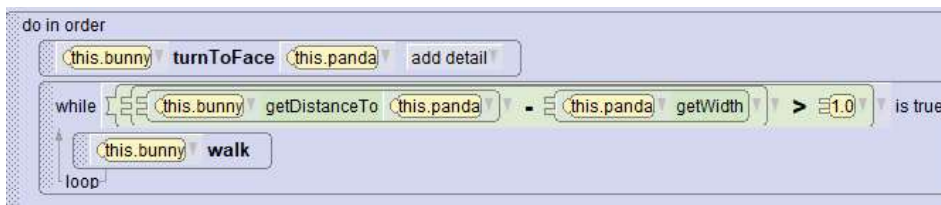
General “Rule of Thumb”

- As a general rule, a While loop should be written so the loop will eventually end
 - Requires statements inside the loop change the conditions of the world such that condition for While eventually becomes false
- If While loop never ends
 - Infinite while loop

CompSci 94 Fall 2024

14

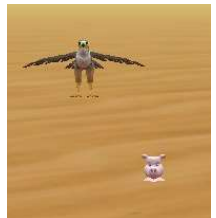
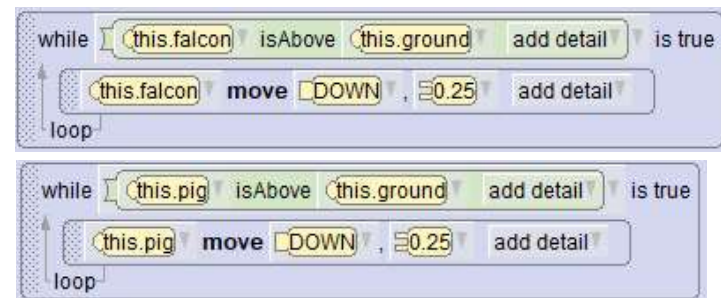
Q1 Compare – What is difference?



CompSci 94 Fall 2024

15

Q2. What happens when run?



CompSci 94 Fall 2024

17

Q3 What happens, when does the loop stop?



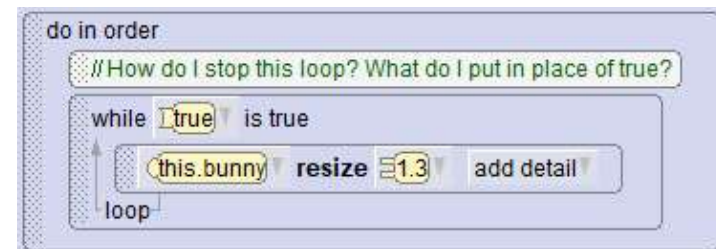
Q4 What happens, when does the loop stop?
(numbers different)



Q5 What happens when this runs?



Q6 What code could I use to stop this loop?



Class Today

- Catching dinner

