CompSci 94
Undetermined Repetition with
While loop
October 14, 2021

Announcements

• QZ and videos for next time

At the Raleigh Fair Grounds

Alice 2 Fair Rides as objects
Double FerrisWheel

Prof. Susan Rodger
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

While statement

- While some condition is true
  - execute instructions
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

Q1 Compare – What is difference?

Q2. What happens when run?

Q3 What happens, when does the loop stop?
Q4 What happens, when does the loop stop? (numbers different)

- They move way too much compared to how close they are supposed to be. This could be an infinite loop!

Q5 What happens when this runs?

- This is an infinite loop! The bunny is never red when the condition is tested. So the condition is always true!

Q6 What code could I use to stop this loop?

- Continue while height is smaller than some number. Stop when height is bigger.

Class Today

- Catching dinner