

Conditional Statements (If/Then)

“Guess Your Age” – Grade Sheet (40 pts.)

Overview: In the programs you just wrote, Player #2 was trying to guess what the secret number Player #1 entered. Let’s change the game. Let’s have the computer find the number.



How do we do this? Do you remember earlier this year when we had students trying to find words in a dictionary? One group had a Linear approach and started asking words on page 1 and continued until they found it. The student in the second group had a binary approach and stated a word in the middle of the dictionary and kept saying higher or lower and would split the difference. Player #2 was much more efficient and always won.

This is how this code works:

Like the student who kept splitting the difference with the dictionary and would go higher or lower based on their previous guess and the other student’s response, you will write a code that does the same, but the only difference is that your program will guess the user’s age.



Guide:

I am providing you with the code below - use it to create the “Guess Your Age” game. Colored code is provided online for you – this might be easier to read!!

View the model on the class website. *Note: The user’s age is ‘51’ in the model.*

Gradesheet

1. Recreate the Program “Guess Your Age.” Replicate the program being shown and provided to you.	15 pts.
2. Clearly explain how each line of code functions in the program.	25 pts.

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when clicked
  play sound xylo2
  wait 1 secs
  say Hello! I heard you had a birthday recently and I wanted to see if I could guess your age. for 5 secs
  say Ready? for 2 secs
  say Just answer Yes or No in the field below for 3 secs
  set lower bound to 1
  set upper bound to 100
  set new question age to round lower bound + upper bound / 2
  set question age to 0
  repeat until question age = new question age
    set question age to new question age
    ask join join Are you older than question age ? and wait
    if letter 1 of answer = y then
      set lower bound to question age + 1
    else
      set upper bound to question age
    set new question age to round lower bound + upper bound / 2
  ask join join Are you upper bound ? and wait
  if letter 1 of answer = y then
    say Yay! I've guessed your age! for 2 secs
  else
    say join join So you're lower bound ? for 2 secs
  stop all sounds
  play sound guitar chords2
  wait 0.5 secs
  say I hope you had an enjoyable birthday. Thanks for playing. for 6 secs
  
```