

CS 260 - Homework 1

Written Component

Complete the attached worksheet. Check your answers using the quiz in Blackboard Learn.

You may attempt the quiz as many times as you want.

Your best score must be 80% or better for this assignment to count.

Programming Component

You will write a simple guessing game based on binary search. The person using the program will think of a secret number between 0 and 100 inclusive. The goal of your program is to guess the number.

The program will guess a value. The user will reply with one of three commands. They may use upper or lower case, but they will never enter a bad command.

- `h` the number is higher than your program's guess
- `l` the number is lower than your program's guess
- `y` the program's guess is correct

Files Required

This program only requires two files.

- `main.c` your program
- `README.md` Anything you want to tell the grader about your program.

Technical Requirements

- You must follow the class C Style Guidelines
- You must follow the course HW Instructions
- Your code must be written in C. You may not include any non-standard libraries
- If you need anything that is not provided you need to build it yourself.
- You must implement the algorithms using any function prototypes described in the instructions. Not all assignments will provide required prototypes. If they do, you may not change them.

Example 1

Think of a number between 0 and 100.

Responses:

`h` or `H` means Higher

`l` or `L` means Lower

`y` or `Y` means yes this is the correct number

Is your number 50?

y
Thank you for playing.

Example 2

Think of a number between 0 and 100.
Responses:
h or H means Higher
l or L means Lower
y or Y means yes this is the correct number
Is your number 50?
h
Is your number 75?
h
Is your number 88?
h
Is your number 94?
h
Is your number 97?
h
Is your number 99?
h
Is your number 100?
y
Thank you for playing.

Example 3

Think of a number between 0 and 100.
Responses:
h or H means Higher
l or L means Lower
y or Y means yes this is the correct number
Is your number 50?
l
Is your number 24?
l
Is your number 11?
l
Is your number 5?
l
Is your number 2?
l
Is your number 0?
y
Thank you for playing.

Example 4

Think of a number between 0 and 100.

Responses:

h or H means Higher

l or L means Lower

y or Y means yes this is the correct number

Is your number 50?

l

Is your number 24?

l

Is your number 11?

h

Is your number 17?

l

Is your number 14?

l

Is your number 12?

y

Thank you for playing.