CS 112 – Final Exam

Program 1 – 30%

Program 1

In your Main function, ask the user the following questions:

1. Please enter your name:
2. Please enter the name of your LDS Ward:
3. Please enter the approximate number of adult males in the ward:
4. Please enter the approximate number of adult females in the ward:

Then print out the following sentence.
There are <males + females> adult members in <name>'s <ward name> ward.

Use the template Final Exam-1 to write your code.

Important Notes:

- Input must be validated on questions 3 and 4.
- The final print statement must follow the exact format (spacing, punctuation, etc.) as in the example.

Example run of the program:

```
Please enter your name: Jeff

Please enter the name of your LDS Ward: Manila 11th

Please enter the approximate number of adult males in the ward: cow
Invalid response.  The number of adult males should be a whole number.
Please enter the approximate number of adult males in the ward: 200

Please enter the approximate number of adult females in the ward: cow
Invalid response.  The number of adult females should be a whole number.
Please enter the approximate number of adult females in the ward: 250

There are 450 adult members in Jeff's Manila 11th ward.
>>>
```

The following will be considered when grading your program:

- Program works
- Directions followed exactly
- Input validation where required
- Good variable names consistently using one of the naming conventions discussed in class and in the book
- General program flow
- Clear and meaningful commenting
- Final print statement follows the exact format as the example

Upload your assignment to the Final Exam Dropbox

Program 2 – 70%

Program 2

In your Main function, ask the user to enter a list of numbers. The user should be able to enter as many numbers as they want. The user will indicate they are done entering numbers by hitting the enter key without entering any data. The user input does NOT need to be validated. You can assume the user will only enter whole numbers (integers).

Write two functions: addNumbers and largestNumber. You will pass the list of numbers to each function and each function must return the result to the main program. The use of global variables is NOT allowed. Print out the results of each function in the main program.

Use the template Final Exam-2 to write your code.

Important Notes:

addNumbers:
This function should add all the numbers in the list and return the total. You must figure out how to add the numbers in the list on your own using the + operator. You may NOT use the sum function.

biggestNumber:
This function should return the largest number in the list. You must figure out how to find the biggest number in the list on your own. You may NOT use the max function.

Example run of the program:

```
In this program you will enter a list of numbers.
Please enter a number or just hit 'Enter' to stop: 5
Please enter a number or just hit 'Enter' to stop: 10
Please enter a number or just hit 'Enter' to stop: 15
Please enter a number or just hit 'Enter' to stop: 20
Please enter a number or just hit 'Enter' to stop: 5
Please enter a number or just hit 'Enter' to stop:

The total of the list of numbers is: 55
The biggest number in the list is: 20
>>>
```

The following will be considered when grading your program:

- Program works
- Directions followed exactly
- Proper use of looping constructs
- Good variable names consistently using one of the naming conventions discussed in class and in the book
- Proper construction of functions
- General program flow
- Clear and meaningful commenting

Upload your assignment to the Final Exam Dropbox