

Lab 6 - Loops (1%)

Due Date: Friday november 11, 2016 at 11.59pm

For each program enter your name and lab section as comments on the first line.

- a) Name your variables according to the conventions
- b) Format your code

1. Use a *for* loop to print "Hello" five times.
2. Create a do-while loop. In the loop ask the user to enter an integer. Add the values entered. If a 5 is entered exit the loop and print the total of the values entered.
3. Create a while loop. Before the loop ask the user to enter an integer. Go through the loop as many times as the number entered. Keep count of the number of times you've gone through the loop and print this number in the loop.
4. Create a menu that looks as follows:

Math Practice

- a. Multiplication
- b. Division
- c. Exit

Select a, b or c

If the user selects a or b ask the user to enter two numbers and the correct answer. (Remember to use three separate prompts and inputs). Check his answer and print either "Correct" or "Wrong ". If the answer is wrong, print "The correct answer is xxxx " where xxxx is the correct answer.

In the division function make sure you check that the divisor is NOT zero or you may get an error. If the divisor IS zero, print "Zero divisor" and "Hit Enter to run the program again" and show the menu again and ask the user to make a selection.

If the user selects anything but a, b or c print "Wrong Entry Try Again – Hit Enter to continue" and wait for him to hit any key before showing the menu again. If he selects a or b then after the calculation, present the menu again. Keep showing the menu until the user selects Exit.

Note: Where appropriate use *system ("cls")* to clear the screen. Pay attention to how information is displayed to the screen. It should be clean, organized and attractive.

6. Assume the bank calculates interest on your bank balance once at the end of each year. Ask the user to enter the starting balance in his account, the number of years he wants to leave the money in the bank and the interest rate paid.

Remember to calculate the interest each year on the balance at the beginning of that year.

Then calculate and print the year's starting balance, the interest paid that year and balance at the end of each year which is the sum of the starting balance and the interest paid as follows:

Starting Balance: 1000.00
 Years deposited: 10
 Interest Rate: 6 %

End of Year	Starting Balance	Interest Paid	End of Year Balance
1	1000.00	60.00	1060.00
2	1060.00	63.60	1123.60

etc.

7. Ask the user to enter a series of integers and stop when they enter -999. Then calculate the average of all values
8. Ask the user to enter an integer with maximum 8 digits then decompose all the digits from right to left:
If the user enters 7815 your program will print: 5,1,8,7
9. Write a do-while loop. Each time ask the user if they want to enter a new character. To confirm repetition the user should press 0 otherwise -1. Convert the character that they have entered to upper case. *(Assume the user will enter a*

lower case character each time and therefore you do not need to handle junk input).

10. Ask the user to enter an integer with maximum 8 digits then reverse the value and print it:

If the user enters 7815 your program will print: 5187

Submission Guidelines

1. Show the questions to your instructor.
2. Submit the a zipped folder containing the .c files on Blackboard