

# Bibek Dhungana

## Lab 1 - Out of Lab Assignment

Due Saturday, January 30, 2021, 11am

Acknowledge your collaborators or source of solutions, if any. Do all the following.

- 1) Write a program that calculates the tip and total amount to pay per person given the bill. The program gets the bill, tip percentage and number of people as input and outputs the amount of tip per person and total per person. Check the “Programming Guideline” document on Blackboard to know what to submit.

Sample run given below where the red bold numbers are the inputs from the user:

TIP CALCULATOR

Enter the bill: **20.25**

Enter the percentage of the tip: **20**

Enter the number of people: **3**

Tip per person is \$1.35 and total per person is \$8.10

The output of the working program is:

# Output

```
PS C:\Users\Dhung\OneDrive\Spring 2021\CS 1412\Assignment> g++ -o test test.c
PS C:\Users\Dhung\OneDrive\Spring 2021\CS 1412\Assignment> ./test
TIP CALCULATOR
Enter the bill: 20.25
Enter the percentage of the tip: 20
Enter the number of the people: 3
Tip per person is $1.35 and total per person is $8.10
PS C:\Users\Dhung\OneDrive\Spring 2021\CS 1412\Assignment> ./test
TIP CALCULATOR
Enter the bill: 30.55
Enter the percentage of the tip: 30
Enter the number of the people: 5
Tip per person is $1.83 and total per person is $13.24
PS C:\Users\Dhung\OneDrive\Spring 2021\CS 1412\Assignment> |
```

## Code:

```
/*
//AUTHOR: Bibek Dhungana
//FILENAME: Lab1.c
//SPECIFICATION: This program calculates the tip and total amount each person should pay for the given bill.
//FOR: CS 1412 Programming Principles 2 Section 504
*/

//importing all the required library
#include <stdio.h>

//function prototype for tipCalculator
void tipCalculator(double totalBill, int tipPercent, int numberOfPeople);

int main(void){
    printf("TIP CALCULATOR\n");

    //initializing the required variables
    double totalBill;
    int tipPercent;
    int numberOfPeople;

    //taking total bill amount input;
    printf("Enter the bill: ");
    scanf("%lf", &totalBill);

    //taking percentage of the tip as input
    printf("Enter the percentage of the tip: ");
    scanf("%d", &tipPercent);

    //taking number of people as input
    printf("Enter the number of the people: ");
    scanf("%d", &numberOfPeople);

    //calling the function to calculate the tips
    tipCalculator(totalBill, tipPercent, numberOfPeople);

    return 0;
}
```

```
//defining the function tipCalculator
//Name: tipCalculator
//INPUT: double totalBill, int tipPercent, int numberOfPeople
//OUTPUT: void (just print the information as side effects)
// This function calculate the tips and total amount each person pay from the bill
void tipCalculator(double totalBill, int tipPercent, int numberOfPeople){
    double totalPerPerson;
    double tipPerPerson;
    double totalTips;

    totalTips = totalBill * (tipPercent/100.0);
    tipPerPerson = totalTips /numberOfPeople;
    totalPerPerson = (totalTips + totalBill)/3.0;

    printf("Tip per person is $%.2lf and total per person is $%.2lf",tipPerPerson,
totalPerPerson);

}
```