Homework Instructions (Video)

- Given in each Homework Assignment
- Grading rubric will also be given in each Homework Assignment

Sample Program Set

```
/*****************************************************/
/* Name : Joe Smith                                  */
/* Student ID : 123456                               */
/* Homework 1 Program Set 1                          */
/* Date : 8/18/20                                    */
/* This Program Finds Sum and Average of 3 numbers   */
/*                                                   */
/*****************************************************/

#include<stdio.h>

int main()
{
    //Declaration
    int num1, num2, num3, sum;
    float avg;
    char name[10];

    //Data/input
    printf("What's your name? ");
    gets(name);
    printf("Enter 3 integers ");
    scanf("%d%d%d", &num1, &num2, &num3);

    //Processing/Calculations
    sum = num1 + num2 + num3;
    avg = sum / (float)3;

    //Output
    printf("Hello, %s\n", name);
    printf("The sum for %d %d %d is\n", num1, num2, num3);
    printf("The sum is %d\n", sum);
    printf("The average is %f\n", avg);

    return 0;

}
```

Output

```
//Test Run 1
//What's your name? Joe Smith
//Enter 3 integers 10 20 30
//Hello, Joe Smith
//The sum for 10 20 30 is
//The sum is 60
//The average is 20.000000
```

```
//Test Run 2
//What's your name? Sam Smith
//Enter 3 integers 45 90 87
//Hello, Sam Smith
//The sum for 45 90 87 is
//The sum is 222
//The average is 74.000000
//
//Test Run 3
//What's your name? Thor Smith
//Enter 3 integers 65 43 23
//Hello, Thor Smith↕
//The sum for 65 43 23 is
//The sum is 131
//The average is 43.666668

//Test Run 4
//What's your name? Who Smith
//Enter 3 integers 34 54 98
//Hello, Who Smith
//The sum for 34 54 98 is
//The sum is 186
//The average is 62.000000

//Test Run 5
//What's your name? Smith
//Enter 3 integers 56 54 33
//Hello, Smith
//The sum for 56 54 33 is
//The sum is 143
//The average is 47.666668
```

Homework

1. Please go over the homework instructions and the video. The instructions will show you how to prepare your homework for submission. There is a sample of how a homework program set is to be submitted. You will submit a file for each program set. Suppose your homework has 2 program sets then you will have to submit 2 .c files.

2. You must submit the .c file with the required test runs(output) at the bottom of the program set and the test runs must be commented out.

3. Make sure to read the instructions on the homework question carefully. You are only to use topics taught in class for that homework assignment. Also, read the grading section of the homework question. I highly suggest that after you have completed your program set, check your program against the grading criteria before submission. Students lost points because they failed to follow the instructions and check the grading rubrics.

4. Make sure to have the required number of test runs at the bottom of each program set. If you do not have the number of required test runs(the required test runs specified) it is considered as an incomplete submission and that program set will receive a zero score.

Test run

What is a test run?

1. A test run is running a program once. If you are required to provide 5 test runs, then you have to run the program 5 separate times. Sample test runs are usually provided for homework and you must also use the sample test runs provided. So, if a question provided you will one sample test run, then you will also use the data from the sample test run and submit that test run as one of the 5 test runs. Meaning you will provide 4 other test runs yourself to make up the 5 test runs required.

2. The sample test run also shows you the specifications of how the output must look like. Your output must look exactly like the sample test run output given.

for example, the sample test run given:

Enter a number : 20

The number entered is : 20

The number divide by 2 is : 10

Your test run output must look exactly the same as above. You cannot change any of the specifications. The example below changes the sample test run specs and will be graded as incorrect and you will receive a zero for that whole program set. The strings were changed for example, "Enter a number : " was changed to "Hello, please input a number : " and the colon for the output were not aligned. The output for 20 and 10 in the second and third line were not right justified.

Hello, please input a number : 20

Thanks, the number you entered is : 20

Divide the number by 2 is : 10

How do I know if my program runs correctly?

The nice thing about programming is that you know the answer.

If you are to write a program to calculate the area of a rectangle, and the user inputs the length and the width. You can check your answer by using a calculator and multiply the length and the width and then check if the answer from your program matches the calculator. This is call hand tracing.

The sample test run provided for you is a solution to the program you are to code. If your program came up with exactly the same output as the sample test run, then your program should be running correctly. But you should test with other input data to make sure that it will also perform correctly with your own test data.