**Baku Higher Oil School**

**Process Automation Engineering Department**

**Programming in C**

**Laboratory 1 – Introduction to Programming C**

**P.S** Add comment for each task; submit the file in LMS before the deadline.

1. Identify and correct the errors in each of the following statements. (*Note*: There may be

more than one error per statement.)

a) scanf( **"&d"**, %value );  
b) printf( **"The sum of %c and %c is %c /n"**, x, y );  
c) a + b + c = sum;  
d) **if** ( number >= largest );  
 largest == number;  
e) \\ Program to determine the largest of three integers  
f) scanf( **"%f"**, float );  
g) printf( **"Remainder of %d divided by %d is \n"**, x, y, x / y );  
h) **if** ( x => y );  
 printf( **"%d is greater than or equal to %d\n, x, y"** );  
i) print( **"The product is &d\n,"** x \* y );  
j) scanf( **"%d, %d, %d"**, &x &y &z );

1. ***(10 minutes) (Final Velocity)*** Write a program than asks the user to enter the initial velocity and acceleration of an object, and the time that has elapsed, places them in the variables u, a, and t, and prints the final velocity, v, and distance traversed, s, using the following equations.
2. ***(13 minutes)* (Arithmetic, Largest Value and Smallest Value)** Write a program that inputs three different integers from the keyboard, then prints the sum, the average, the product, the smallest and the largest of these numbers. Use only the single-selection form of the if statement you learned in this chapter. The screen dialogue should appear as follows:

Enter three different integers: 13 27 14  
Sum is 54  
Average is 18  
Product is 4914  
Smallest is 13  
Largest is 27

1. ***(10 minutes)* (Converting from seconds to hours, minutes and seconds)** Write a program that asks the user to enter the total time elapsed, in seconds, since an event and converts the time to hours, minutes and seconds. The time should be displayed as hours:minutes:seconds. [Hint: Use the remainder operator]
2. ***(2 minutes)*** What does the following code print?

printf ( **"\*\n\*\*\n\*\*\*\n\*\*\*\*\n\*\*\*\*\*\n"** );\

1. ***(5 minutes)* (Table of values)** write a program that print the following table of values:

|  |  |  |
| --- | --- | --- |
| hours | minutes | seconds |
| 1h | 60m | 3600s |
| 2h | 120m | 7200s |
| 3h | 180m | 10800s |

1. ***(5 minutes)* (Multiples)** Write a program that reads in two integers and determines and prints whether the first is a multiple of the second. [Hint: Use the remainder operator.]
2. ***(15 minutes)* (Separating Digits in an Integer)** Write a program that inputs one five-digit number, separates the number into its individual digits and prints the digits separated from one another by three spaces each. [Hint: Use combinations of integer division and the remainder operation.] For example, if the user types in 42139, the program should print: 4 2 1 3 9
3. ***(5 minutes)*** Write program to swap two numbers.