Programming Fundamentals LAB – BSEF19

(Both Morning and Afternoon)

Lab 02 – 19-02-2020

YOU MUST USE Developer Command Prompt for VS …, to compile and execute all the programs. Use of any IDE weather you are expert is not allowed for this LAB unless and until you convinced me in personal capacity.

Task 01 (5)

1. Test your compilation environment by typing **cl** at the command prompt and observing OS Command interpreter is recognizing it.

Task 02 (5 each)

1. Compile and execute **01Distance.cpp** file in the LAB02 folder.
2. Update code to remove output and input mistakes, if any. Compile and execute updated **01Distance.cpp** file in the LAB02 folder as many times, it is required.
3. Create a new and similar C++ program named **11velocity.cpp** to compute and display final velocity at certain time.

Task 03 (5 each)

1. Compile and execute **02fibonacci.cpp** file in the LAB02 folder.
2. Update code to remove output and input mistakes, if any. Compile and execute updated **02fibonacci.cpp** file in the LAB02 folder as many times, it is required.
3. Create a new and similar C++ program named **12fibplus.cpp** to compute and display sum of three instead sum of two. Initial three numbers are taken as 1, 2 and 5, which are 0 and 1 in example provided.

Task 04 (5 each)

1. Create, compile and execute a program named **13tenums.cpp** to output first 10 positive numbers, one per line.

2. Create, compile and execute a program named **14tableof2.cpp** to display table of two you studied/learned in your early schooling.
3. Create, compile and execute a program named **15lacums.cpp** to output first **1 lac** positive numbers, one per line.
4. Create, compile and execute a program named **16tableofN.cpp** to display table of N, N being a user input.

Task 05 (5 each)

1. Compile and execute **03largest.cpp** file in the LAB02 folder.
2. Update code to remove output and input mistakes, if any. Compile and execute updated **03largest.cpp** file in the LAB02 folder as many times, it is required.
3. Create, compile and execute a program named **17largestof20.cpp** to input 20 values and display the largest one among them.

Task 06 (5 each)

1. Develop and test a C++ program to print remainder of when a larger number is divided by a smaller number without using **%** operator. HINT: for integer operands **/** operator provides quotient or in other words it automatically drops the fractional part of answer.
2. Develop and test a C++ program to solve a linear equation $ax + b = 0$. Your program inputs **a** and **b** and display the value of **x**.
3. Develop and test a C++ program to solve those quadratic equation $ax^2 + bx + c = 0$ whose both roots are real. Your program inputs **a, b** and **c** and display the value of **x**.
4. Develop and test a C++ program to output reverse counting from a larger number M to smaller number Z. For example, if M is 40 and Z is 15, your program output number in range 15 to 40 but in reverse order.
5. Write a program to input marks of your first semester and display your percentage marks. It also displays, your CGPA just based on your final percentage marks.

Thanks, for your **patience**