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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Introduction to computing Lab** | **Course Code:** | **CS 101** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Fall 2016** |
| **Duration:** | **140mins** | **Total Marks:** | **50** |
| **Date** | **16-10-16** | **Weight** | **15%** |
| **Section:** | **E** | **Pages:** | **2** |
|  |  |  |  |

NOTE:

* Plagiarism will lead to straight **F** in Lab.
* Use of internet, notes (hard or soft form) and any other helping code is **NOT** allowed.
* No extra time will be given. Manage your time properly and Submit within time.
* Submit **ONLY .CCP Files** in this format (Your Roll no. and problem number):

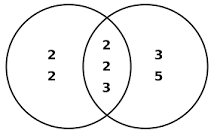
YY-XXXX**P1**.ccp

YY-XXXX**P2**.ccp

**Problem 1: (5 Marks)**

Write a C++ program to enter two numbers and find LCM(Lowest Common multiple.) using for loop.

**LCM:** In arithmetic and number theory, the **least common multiple** (also called the lowest common multiple or smallest common multiple) of two integers a and b, usually denoted by **LCM**(a, b), is the smallest positive integer that is divisible by both a and b. If a=48, b = 180 then:



**Problem 2: (10 Marks)**

Write a C++ program to read Hexadecimal number from user and convert it to Octal number system.

You can either go from Hexadecimal to Binary and then to Octal, and second way is to go to Decimal first and then to Octal. It’s your choice to choose the way.

**(Use only Switch statement)**

**Example:**   
Input hexadecimal number: (1A)16   
Output octal number: (32)8

**Hint:** Use char datatype for input.

**Problem 3: (15 Marks)**

Write a program that takes as input a set of numbers and print the maximum, minimum, and Second maximum and second minimum and average. User will terminate input at -1, and assume there can be only one student, no student, two students and more. So be careful for input.

**Problem 4: (15 Marks)**

This program takes an arithmetic operator +, -, \*, / and firstly two operands from the user and performs the calculation on that two operands depending upon the operator entered by the user, then store the result in first operand, for next step again take input a second operand and an operator in same variable of operator.Input will be stopped when user enters '=' in operator. and result will be displayed.

**Hint:** You will use a switch statement inside a while/for/do-while loop, in which for every operator you will perform above calculations.