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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:** | **Spring 2017** |
| **Duration:** | **110mins** | **Total Marks:** | **50** |
| **Date** | **17-03-17** | **Weight** | **30%** |
| **Section:** | **B** | **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

**Question#1**

You are hired on Security Company, where you actually need encryption and decryption. Now You need to implement a software in which you ask a number named X from User and ask the letter from user, which you want to encrypt. Actually You need to subtract the Number X from ASCII of letter.

Let’s say letter is ‘A’ and you subtract (X=3) from its ASCII, it will be some special character, So make sure your letter should go to ‘X’ and so on. And If the letter is X and number is (X=-3) and you subtract the number, Actually the number will be added and letter will go to ‘A’.

You are given with an example: (ASCII of Capital letters, 65-90 and of small letters, 97-122).

**Example 1:**

Input X: 3

Input charatcer: A

Output: X

Input charatcer: D

Output: A

Input charatcer: #

Program Terminated.

**Example 2:**

Input X: -3

Input charatcer: A

Output: D

Input charatcer: D

Output: G

Input charatcer: #

Program Terminated.

**Question#2**

Input a integer number from user ( Assume that number is in Binary format e.g int binaryNumber = 10001; ) but actually number is in decimal. Initially you need to convert this number in binary. Now use this converted binary number to convert it to hex.

Hint: You can do it by converting this number to actuall binary and then to decimal, which can help you to convert the number in to HEX.

Sample Input: 10001

Decimal Number: 17 (Optional)

Hex Number: 11

**Question#3.**

User is asked to enter a series of numbers. That input will stop when user enters -9999. Find a maximum number from that series and a minimum number from that series. Output the location of Maximum number and minimum number.

Sample Input: 1

4

-5

2

7

3

-9999

Output: Maximum Number’s Location: 4th

Minimum Number’s Location: 2nd