# Department of Computing

# Class: SE-7B

# Lab 5: Exceptions

# Date: November 16, 2016

# Time: 2pm-5pm

# Instructor: Dr. Muddasir

# Lab 5

**Tools/Software Requirement**

Python

#### Lab Tasks:

Incorporate error handling.

1. Write program which determine whether the year entered by the user is leap year or not. Suppose year 2000 was leap year.
2. Write program in which if integer variable **currentNumber** is odd, change its value so that it is now 3 times **currentNumber** plus 1, otherwise change its value so that it is now half of **currentNumber** (rounded down when **currentNumber** is odd)
3. Implement ATM system. There should be a login and a fix amount is deposited by default. Some transaction is performed and prints the whole transaction bill.
4. Write a program which takes marks of user as input and then display “Grade A” if marks is greater than 90, display “Grade B” if marks is between 80 and 90, display “Grade C” if marks is between 70 and 80, display “Grade D” if marks is between 60 and 70 or else print “Grade F”.
5. Write a program which takes five digit number from user and check whether its palindrome or not.
6. A company wants to transmit data over the telephone, but they are concerned that their phones may be tapped. All of their data is transmitted as four-digit integers. They have asked you to write a program that will encrypt their data so that it may be transmitted more securely. Your program should read a four-digit integer and encrypt it as follows: Replace each digit by the remainder after (the sum of that digit plus 7) is divided by 10. Then, swap the first digit with the third, and swap the second digit with the fourth. Then print the encrypted integer. Write a separate program that inputs an encrypted four-digit integer and decrypts it to form the original number.

**Note: Write programs in the form of functions and use function calling.**