Assignment#1

[100 Points]

Notes:

1. *Cheaters will be graded by –ve points*
2. *Submission on Moodle.*
3. *File Name is NAME 1- ID 1_NAME 2 –ID 2.rar*
4. *Due Date 13/11/2015, 11:30 PM*
5. *Pair programming (Max. 2 students).*
6. *Discussion of assignment will be in your TA's office hours.*

Simple Bank System

- You are going to implement 3 classes. Separate implementation and interface for each class (.h /.cpp).
- Write a driver program to test your class.
- At the end test cases to test your code.

a) Implement **class** to represent **Date**. [20 Points]

Attributes:
- Day: **int**
- Month: **int**
- Year:**int**

Methods:
- **Constructor** Date(string date): takes string in format "dd/mm/yyyy"
- **Constructor** Date(int day ,int month ,int year)
- Setters/getters -for all member variables.-

b) Implement class to represent Bank Account [40 Points]

With Attributes:

- Account Name text with spaces :**char *** or **string**

- Account ID : unique value :**int**

- Balance :**double**

- date **: Date** that represent the creation date of the account

Methods:

- **Constructor default** and **parameterized** with name, Balance and current date

- **Destructor**

-**Setters and Getters**

-**View** to view Account Name, Account ID, current balance and date

-**double Deposit(double value)**

which returns balance value after **adding** the amount of deposit.

-**double Withdraw(double value)**

which calculate balance value after subtracting the amount of Withdraw. if balance >= value compute the amount of withdraw otherwise " Cannot Withdraw From the account , No available balance"

c) Implement class to represent Customer [40 Points]

With Attributes:

- Nametext with spaces :**char *** or **string**

- National ID :**int**

- Gender character holds **f** or **m** :**char**

- account :**Account**

Methods:

- **Constructor default**, **parameterized** with name, National ID and gender

- **Destructor**

- **Setters and Getters**

- **View** to view Name, ID, Gender and Account Information

[Test Cases] Main should have at least 2 customers

Input 1 :

Customer Name : Omar Ahmed

Gender : m

National ID : 05158410
Omar created his bank account on 2-11-2015.
He deposited 200 LE on his account and after 2 days he decided to withdraw 150 LE.

Output 1 :

Customer View Function :

- Customer Name : Omar Ahmed
- Gender : m
- National ID : 05158410
- Account Balance : 50 LE
- Account Date : 2-11-2015
- Account Id :1
- Account Name : OMAR AHMED

Input 2 :

- Customer Name : Karim Mohamed
- Gender : m
- National ID : 205158410
  Karim created his bank account on 3-11-2015.
  He try to withdraw 150 LE.

Output 2:

Customer View Function :

- Customer Name : Karim mohamed
- Gender : m
- National ID : 205158410
- Account Balance : 0 LE
  (Cannot Withdraw From the account .. No Balance in the account)
- Account Date : 3-11-2015
- Account Id :2
- Account Name : KARIM MOHAMED