Object Oriented Paradigm

Lab 05

**Topic(s): Default, Non-Parameterized, Parameterized & Copy Constructors.
Constant Data Members & Functions.**

Question No. 01

You are required to design your own string class named MyString. Required functions and operators are mentioned and described below.

```
class MyString {

public:

// Constructors - You know what they do
        MyString();      //select size by default 10
        MyString(char*);       //size equal to the size of char* passed in parameter
        MyString(char*,int);   //size is equal to an integer passed as argument
// Setters / Getters, you know them also
        void setMyArray(char*);
        const char* getMyArray() const;
        const int getSize() const;
// A function to see contents of array
        void print() const;
// Destructor
        ~MyString();
private:

        char* myArray;
        const int size;
};
```

Question No. 02

Write a C++ program to represent a MobileNetwork using classes and objects. Display the details such as name, mobile number, package type (daily/weekly/monthly), balance and callRate (per minute) on the given number. Use default and parameterized constructors to initialize class attributes. Make an accessor and a mutator function for each attribute. Add Recharge(), Discharge(), CallCharges() and CheckBalance() functionality in class. In the main function, declare objects of MobileNetwork with different name, number and package and make calculation for a given call length and deduct amount from the balance.

Question No. 03

Write a C++ program to make a database for a bank to store account information of customers using classes and objects. Display the details such as name, account number, account type (saving/current) and balance in the given account number. Information of accounts will be stored in a text file. You must write data in a file and store the information into objects.

Following operations are expected on the data:

- User can deposit money in the account.
- User can withdraw money from the account.
- User can change their account type.

Now write the following operations for the class:

- Write the default, parameterized and copy constructors.
- Write separate setter functions for each attribute to set their value.
- Write separate getter functions for each attribute to get their value.
- Write a separate function to write all the data in a file.
- Write a destructor to release all allocated memories.

Cutomers.txt

```
Ali 443000 S 23045
Tahir 446700 C 5000
Armghan 443640 S 100000
Ahmad 443000 C 23895
Numan 443000 S 28945
Zahid 443000 C 98245
Usman 45900 C 235
Aneel 89753 C 600
Irtaza 89003 C 600
Saliha 855553 C 600
```