

## **Object Oriented Programming**

Lab 09	
Topic	Classes in C++, Overloaded Constructors, shallow vs deep copy, copy constructor, destructor, setterGetters, operator overloading
Objective	Making students familiarize with classes and their implementations in C++, methods, constructors, setters Getters, char * as attribute shallow vs deep copy, copy constructor, destructor and access Specifiers, const attributes, objects and functions, operator overloading

## **Instructions:**

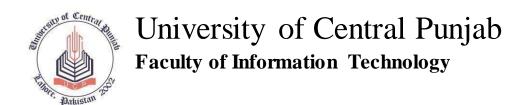
- Comment your code.
- Use meaningful variable names.
- Name of the program should be same as the task name. i.e. the first program should be Task\_1.cpp
- void main() is not allowed. Use int main()
- You are not allowed to use system("pause")
- You are not allowed to use any built-in functions
- REMEMBER: MAKE YOUR OWN DEEP COPY AND STRING LENGTH FUNCTIONS.DONOT USE STRING LIBRARY FUNCTIONS.THEIR DECLARATIONS CAN BE:

void deepCopy(char\* &dest, const char\* src);
int strLength(const char\* src);

- Make separate files known as helperFunctions.h and helperFunctions.cpp for strLength and deepCopy functions etc.
- You are required to follow the naming conventions as follow:

<u>Variable s:</u> firstName; (no underscores allowed)
<u>Function:</u> getName(); (no underscores allowed)
<u>ClassName:</u> BankAccount (no underscores allowed)

Students are required to complete the following tasks in lab timings.



## Task 1:

Define a class MyChar having following attributes.

- Char ch
- Static int charCount;

## Now do the following operations on above mentioned class:

- 1. Write parameterized constructor with default arguments (with input validation).
- 2. Write separate setter functions for each attribute to set value (with input validation).
- 3. Write separate getter functions for each attribute to get value.
- 4. Write a display function to display to show total charCount.
- 5. Write a function to return Total CharCount.