National University of Computer and Emerging Sciences

Lab Manual

for

Object Oriented Programming

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Section	OOP BSCS-2A
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Lab Manual 6

Objectives:

After performing this lab, students shall be able to:
- ✓ Create overloaded constructors
- ✓ Create destructors
- ✓ Handle dynamic memory for class data members as well as declaring objects.

Problem 1

In this task, we are going to create a small scale **Event Management System**. First make two files: **event.cpp, event.h** to separate class header and implementation.

1. Create a **class Event** with following variables: **char* event_name**, **char* event_venue**, **char event_date[11]** and **char event_time[9]**.
   - Input format for event_date: dd-mm-yyyy
   - Input format for event_time: hh:mm am/pm

2. Implement default constructor and overloaded constructor. Print "Default Constructor Called" and "Overloaded Constructor Called" in the respective constructors. The declaration for overloaded constructor is as follows:
   - **Event(char event_name[20], char event_venue[50], char event_date[11],char event_time[9]);**

3. Implement all setters and getters for class Event.

4. Implement the destructor **~Event()** for class **Event**. Print "Destructor Called" in the destructor. Deallocate all the dynamically allocated memory of class data members.

5. Implement **addEventOver** function that should not be a part of Event class. This function will add a new **Event** using overloaded constructor. **Event* addEventOver(Event *eve);**

6. Implement **addEventSet** function that should not be a part of Event class. This function will add a new **Event** using setters. **void addEventSet(Event eve);**

7. Implement **displayEvent()** function. This will display event details of dynamic class object . You can use getters in this function.

Sample Menu Program:

Menu Program

Add New Event Using Overloaded Constructor: Enter 1

Add New Event Using Setters: Enter 2

Display Event: Enter 3

Exit: Enter 0

Enter your choice: 1

Add New Event

Enter event name: Programming 101

Enter event venue: Rafaqat Ali Auditorium

Enter event date: 06-10-2020
Enter event time: 11:30 AM

Note:
- Deallocate all dynamically allocated memory.
- Do not use copy constructor.
- Do not use strcpy() function. Copy the character array manually where needed based on ending '\0' character.
- Follow all the code indentation, naming conventions and code commenting guidelines.