National University of Computer and Emerging Sciences



Lab Manual 05

**Section BCS 2B**

**16th April, 2021**

Object Oriented Programming

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| Course Instructor | Miss Abeeda Akram |
| Lab Instructor (s) National University of Computer and Emerging Sciences    Lab Manual 02  Object Oriented Programming  Department of Computer Science  FAST-NU, Lahore, Pakistan  1.1 Objectives  After performing this lab, students shall be able to:   Have an improved understanding of pointers.   Create and manipulate 1D dynamic array.   Allocation and de-allocation of 1D array.   Passing dynamic arrays into functions. | Ms. Abiha Aftab  Mr. Dilawar Shabbir |
| Section | BCS – 2A |
| Semester | Spring 2021 |

Department of Computer Science

FAST-NU, Lahore, Pakistan

## Objectives

After performing this lab, students shall be able to:

1- To learn the concept of classes

2- To create and implement classes in C++

**TASK 1:**

Write a program by creating an 'Employee' class having the following functions and print the final salary.  
1 - 'getInfo()' which takes the salary, number of hours of work per day of employee as parameters  
2 - 'AddSal()' which adds $10 to the salary of the employee if it is less than $500.  
3 - 'AddWork()' which adds $5 to the salary of the employee if the number of hours of work per day is more than 6 hours.

**TASK 2:**

1- Create a class named Rectangle.

2- Define its private variables length, width, variable area.

Inside this class make these functions:

3- Define set functions for length and width. These should check that the values are

greater than zero, else these function should print “length should be greater than zero”

“width should be greater than zero”. Name of functions should be like “set\_length()”

4- Define calculate area function, it should set the area =length\*width.

5- Define a get functions for all 3 member variables. Function names should like

“get\_length()”

6- Create a function is\_square() it should return True if length=width of rectangle else

false.

7- Define a function to display() rectangle. It should print a rectangle using \*, for

example if length =3 and width = 9, display should print

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**Task 3:**

**Question # 1**

Define and Implement all functions of following point class and design a Main driver to test all functions.



