National University of Computer and Emerging Sciences



Lab Manual 09

Object Oriented Programming

Date : 13th April, 2021

|  |  |
| --- | --- |
| Course Instructor | Ms. Noshaba Nasir |
| Lab Instructor (s) | Saif Ali  Siddiqua Nayyer |
| Section | BDS-2A |
| Semester | Spring 2021 |

Department of Computer Science

FAST-NU, Lahore, Pakistan

## Objectives

After performing this lab, students shall be able to perform:

* Cascaded and operator overloading.
* Operators pre and post increment

**Task 1:**

Overload insertion extraction pre and post increment operators for 3D vector class given in last lab.

Make sure that your class also has constructors as was given in last lab (in case you have not covered last lab)

Task 2:

in main.cpp or file test the overloaded functions using following steps.

1) Create V1 and V2 with values (1,2,3) and (2,2,3) respectively

2) cout<<V1++; // check its output it should print 1,2,3 on screen

3)cout<<V1; // check its output it should print 2,3,4

4)cout<<++V2; //it should print 3,3,4 on screen

5)cout<<V1<<V2; //check if cascaded insertion is working it should print following

2,3,4

3,3,4

6) Create an ofstream (you may name is ofs) and open output\_vectors.txt file by ofs (dont forget to include fstream in main).

Write V1 nad V2 on output\_vectors.txt file. After writing the file should have V1 in line 1 and V2 on line2 as shown below.

Close ofs after writing.

2,3,4

3,3,4

7)Read the value of vector from screen using cin>>V2; the user should type comma seperated componets of vector, for example, 3,5,6

if input is given in any other format, print "input in incorret format. "

8) Create an ifstream (you many name it ifs), an open input\_vector.txt file by ifs. Read the vector given in file in V1.

print it on screen to see if you have read the correct values. close ifs after reading.

9) Create an ifstream to open file input\_vectors.txt file. The first line of file contains number of vectors in file.

Create a dynamic array of vectors of that size. Read all the vectors from file in that array. Print the array vectors to see the if

you have read correctly.