



# University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)

**FACULTY OF INFORMATION TECHNOLOGY**

## Programming Fundamentals

| Lab 04    |  |
|-----------|--|
| Topic     | File Reading and File Writing  |
| Objective | <ul style="list-style-type: none"><li>• File I/O (Text File Writing)<ul style="list-style-type: none"><li>○ Need and importance of File Output.</li><li>○ Different modes of output file stream (out, app).</li><li>○ Opening/Closing a text file stream.</li><li>○ Writing formatted/un-formatted data to file.</li><li>○ Problem solving involving files (ofstream).</li></ul></li><li>• File I/O (Text File Reading)<ul style="list-style-type: none"><li>○ Need and importance of File I/O.</li><li>○ Mode of input file stream (in).</li><li>○ Difference of file streams. (ifstream / ofstream / fstream)</li><li>○ Opening/Closing a text file stream.</li><li>○ Reading formatted/un-formatted data from file.</li><li>○ Problem solving involving files (ifstream).</li></ul></li></ul> |

### Lab Description:

This lab is basically design for the practice of file writing. You will also learn importance of file input and how to read from a text file.



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## **Lab Tasks**

### **Marks problem:**

As we solve a marks problem in previous lab. In which we need to store the position holder information in a file. Store each record on each line of file. Let's try to solve the same problem but this time marks of students are stored in a file as well. So in order to find position holder we need to read the data of marks from a file.

### **Uber stars problem:**

As we solve a problem of uber stars. In which we store the information of starts of each ride. Now we need to calculate the average stars of driver. Use the file which you create in previous lab in order to find the average stars award to a driver.

### **Movie rating problem:**

Now we have a file (which we created in previous lab) which holds the information of likes and dislikes on a YouTube video. We store the links into another file. Now identify the video which have maximum likes and which have minimum dislikes.

### **Grade analysis problem:**

As we solve a problem of grade analysis in which, we store the information of grades and its count.

#### **Max count:**

Find the grade with maximum count.

#### **Min count:**

Find the grade with minimum count.

#### **Average grade:**

Find the grade with average count.

### **Admission form problem:**

Now UCP have a file which stores the information of their students.

#### **Count of each faculty:**

Calculate the count of students of each faculty and store in into another file.

#### **Count of Students with Scholarship:**

Calculate the count of students with scholarship and store in into another file.