University of Gujrat, Hafiz Hayat Campus



**Laboratory Exercise**

*For*

**Programming Fundamentals Lab**

**(IT-103)**

|  |  |
| --- | --- |
| Course Instructor |  |
| Lab Instructor |  |
| Semester | Fall 2016 |

**PF Lab 5 Exercise**

|  |
| --- |
| **Objectives:**  Decision Control Structure (If-else)   * The if statement. * Flow chart of if statement. * Multiple statements within if. * Nested if-else’s. |

# Problem 5.1: Write C++ code for the problem statements.

Write a program to find the greatest of the three numbers entered through the keyboard using conditional operators.

# Problem 5.2: Write C++ code for the problem statements.

Write a program to find whether entered integer through the keyboard is even or odd using conditional operators.

# Problem 5.3: Write C++ code for the problem statements.

The marks obtained by a student in 5 different subjects are input through the keyboard. The student gets a division as per the following rules:

Percentage above or equal to 60 - First division

Percentage between 50 and 59 - Second division

Percentage between 40 and 49 - Third division

Percentage less than 40 - Fail

Write a program to calculate the division obtained by the student.

**Note:** Also, draw flow chart of the above program.

# Problem 5.4: Write C++ code for the problem statements.

A certain grade of steel is graded according to the following conditions:

1. Hardness must be greater than 50
2. Carbon content must be less than 0.7
3. Tensile strength must be greater than 5600

The grades are as follows:

Grade is 10 if all three conditions are met

Grade is 9 if conditions (i) and (ii) are met

Grade is 8 if conditions (ii) and (iii) are met

Grade is 7 if conditions (i) and (iii) are met   
Grade is 6 if only one condition is met

Grade is 5 if none of the conditions are met

Write a program, which will require the user to give values of hardness, carbon content and tensile strength of the steel under consideration and output the grade of the steel.

**Note:** Also, draw flow chart of the above program.