

LAB SHEET #4

Title: Decision statements/Structures

Objective(s):

- To understand the programming knowledge using Decision Statements (if, if-else, ifelse if ladder, switch)

Theory: (Short theory on Decision Statements (if, if-else, if elseif ladder, switch, goto) and conditional operator)

Write a program to input marks of 5 subjects (Physics, Chemistry, Math, English& Biology) for a student. Display the rank of each subjects and also the result of total marks and percentage obtained with his/her rank in the class. The rank is categorized as fail (marks < 40%), pass & third division (marks between 40 to 55%), second (marks between 55 to 65%), first (marks between 65 to 80%), Distinction (marks between 80 to 95%), extra ordinary (marks above 95 to 100%).

Problem Analysis:

Algorithm:

Flowchart: Code:

Output (Compilation, Debugging and Testing):

Discussion and Conclusion:

Lab Exercises (Please Code yourself and show the output to instructor):

1. Write a program to find the largest and smallest among three entered numbers and also display whether the identified largest/smallest number is even or odd.
2. Write a program to find the largest and smallest among three entered numbers, using conditional operator.
3. Write a program to check whether input alphabet is vowel or not using if-else and switch statement.
4. Write a program to get input of two or higher digit integer number and display in reverse order.
5. Write a program that asks a number and test the number whether it is multiple of 5 or not, divisible by 7 but not by eleven.
6. Write a program to check whether the entered year is leap year or not (Every year that is exactly divisible by four is a leap year, except for years that are exactly divisible by 100, but these centurial years are leap years if they are exactly divisible by 400. For

example, the years 1700, 1800, and 1900 were not leap years, but the years 1600 and 2000 were)

7. Write a program to read the values of coefficients a, b and c of a quadratic equation $ax^2+bx+c=0$ and find roots of the equation.