

## Lab 2: Basic Programs & Programs on if-else and nested if-else

1. Write a C Program to print greatest of three numbers.
2. Write a C Program to check whether a given year is leap year or not.
3. Write a C Program to calculate electricity bill given the number of units as input. Assume any values for sur charge and charge per unit.
4. Write a C Program to calculate salary of an employee given the basic salary. Assume values for DA and HRA. (As discussed in class)
5. Write a C program to check if three numbers are equal or not.

input1: 3 3 3  
output1: Equal

Input2: 3 4 5  
Output2: Not Equal

6. In our school days, all of us have enjoyed the Games period. Raj loves to play cricket and is captain of his team. He always wanted to win all cricket matches. But only one last game period is left in school now. After that he will pass out from school. So, this match is very important to him. He does not want to loose it. So he has done a lot of planning to make sure his team wins. He is worried about only one opponent - Vinay, who is very good batsman. Raj has figured out 3 types of bowling techniques, that could be most beneficial for dismissing Vinay. He has given points to each of the 3 techniques. You need to tell him which is the maximum point value, so that Raj can select best technique. Taking 3 numbers are input, output the maximum point value.

input1: 3 14 23  
output1: 23

Input2: 3 3 3  
Output2: 3

7. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:  
Percentage  $\geq$  90% : Grade A  
Percentage  $\geq$  80% : Grade B  
Percentage  $\geq$  70% : Grade C  
Percentage  $\geq$  60% : Grade D  
Percentage  $\geq$  40% : Grade E  
Percentage  $<$  40% : Grade F

8. Write a C program to input sides of a triangle and check whether a triangle is equilateral, scalene or isosceles triangle

input1: 30 30 30  
output1: equilateral

Input2: 20 35 35  
Output2: isosceles

Input2: 20 30 40  
Output2: scalene

9. Write a C program to input day number and print weekday

input1: 1  
output1: Monday

Input2: 7  
Output2: Sunday

10. Write a C program to print a number of days in a month by taking year and month numbers as input.

input1: year=2018 month=2

Input2: year=2022 month=12

output1: 28

Output2: 31

**11. Write a C program to find the next date of the given input date. The input is taken into 3 different variables d, m and y representing date, month and year. The sample input and outputs are given below. If any invalid date is given as input, print "Invalid Input".**

Input: 10 12 2022  
Output: 11 12 2022  
Input: 28 2 2020  
Output: 29 2 2020

Input: 31 1 2022  
Output: 1 2 2022  
Input: 29 2 2020  
Output: 1 3 2020

Input: 28 2 2022  
Output: 1 3 2022  
Input: 31 11 2022  
Output: Invalid Input

**12. Write a C program to check the input character is an alphabet, digit or special character**

**13. Write a C program to check whether the given input character is a vowel or consonant.**

**14. Write a C program to check whether a character is uppercase or lowercase alphabet.**