

## **Lab : 3**

### **Objective(s):**

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

**Program:** Write a program to print whether a given number is even or odd.

**Code:** *(Use comments wherever applicable)*

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int num;
    printf("Enter the number: ");
    scanf("%d",&num);
    if(num%2==0)
        printf("\n %d is even", num);
    else
        printf("\n %d is odd", num);
    getch();
}
```

### **Output:**

Enter the number: 6  
6 is even

## SAMPLE PROGRAMS

*(Students are to code the following programs in the lab and show the output to instructor/course Teacher)*

### Instructions

- Write comment to make your programs readable.
- Use descriptive variables in your programs(Name of the variables should show their purposes)

### Programs List

1. Write a Program to Check Whether a Number is Prime or not.
2. Write a program to compute grade of students using **if else ladder**. The grades are assigned as followed:

<b>Marks</b>	<b><u>Grade</u></b>
a. marks<50	F
b. $50 \leq \text{marks} < 60$	C
c. $60 \leq \text{marks} < 70$	B
d. $70 \leq \text{marks} < 80$	B+
e. $80 \leq \text{marks} < 90$	A
g. $90 \leq \text{mars} \leq 100$	A+

3. Write a program to check whether the entered year is leap year or not (a year is leap if it is divisible by 4 and divisible by 100 or 400.)
4. Write a program to find the factorial of a number.
5. Write a C program to find the largest of 3 numbers
6. Write a program to check number is Armstrong or not.  
(Hint: A number is Armstrong if the sum of cubes of individual digits of a number is equal to the number itself).
7. Write a C program to find the number of integers divisible by 5 between the given range num1 and num2, where num1 < num2. Also find the sum of all these integer numbers which are divisible by 5 and display the total.

**Program:** Write a program to find whether a character is consonant or vowel using **switch statement**.

```
#include<stdio.h>
void main()
{
    char ch;
    printf("Enter any alphabet:"); //input alphabet from user
```

```

scanf("%c", &ch);
switch(ch)
{
    case „a”:
    case „A”:
        printf("Vowel");
        break;
    case „e”:
    case „E”:
        printf("Vowel");
        break;
    case „i”:
    case „I”:
        printf("Vowel");
        break;
    case „o”:
    case „O”:
        printf("Vowel");
        break;
    case „u”:
    case „U”:
        printf("Vowel");
        break;
    default:
        printf("Consonant");
}
}

```

8. Write a program to print day name using **switch case**.
9. Write a program to determine whether the input character is capital or small letter, digits or special symbol.
10. Write a program to check whether a date is valid or not.
11. Write a program to check whether a number is positive, negative or zero using switch case.
12. Write a program that asks user an arithmetic operator('+','-', '\*' or '/') and two operands and perform the corresponding calculation on the operands using switch case.