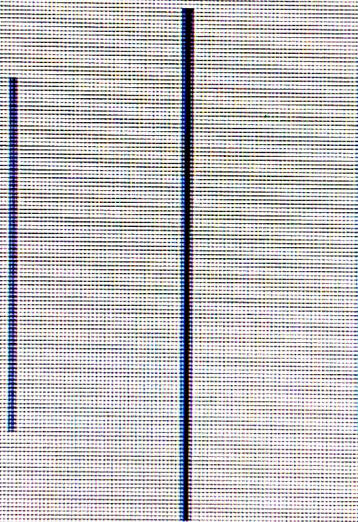


**INSTITUTE OF ENGINEERING
ADVANCED COLLEGE OF ENGINEERING
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KUPONDOLE, LATTIPUR
(AFFILIATED TO TRIBHUVAN UNIVERSITY)**



LAB REPORT

LAB NO.: 5

SUBJECT: C PROGRAMMING

SUBMITTED BY:

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DATE: 2078/03/**

SUBMITTED TO:

**DEPARTMENT OF
COMPUTER &
ELECTRONICS**

WAP to add, sub, mul, div, two integer using user defined type function with return type.

```
#include <stdio.h>
```

```
int add (int n1, int2);
int sub (int n1, int2);
int mul (int n1, int2);
int div (int n1, int2);
```

```
int main()
```

```
{
```

```
    int num1, num2;
```

```
    printf ("Enter two no : ");
```

```
    scanf ("%d %d", &num1, &num2);
```

```
    printf ("%d + %d = %d \n", num1, num2, add (num1, num2));
```

```
    printf ("%d - %d = %d \n", num1, num2, sub (num1, num2));
```

```
    printf ("%d * %d = %d \n", num1, num2, mul (num1, num2));
```

```
    printf ("%d / %d = %d \n", num1, num2, div (num1, num2));
```

```
    return 0;
```

```
}
```

```
int add (int n1, int n2)
```

```
{
```

```
    int result;
```

```
    result = n1 + n2;
```

```
    return result;
```

```
}
```

```
int sub (int n1, int n2)
```

```
{
```

```
    int result;
```

```
    result = n1 - n2;
```

```
    return result;
```

```
}
```

```
int mul (int1, int2)
```

```
{
```

```
    int result;
```

```
    result = n1 * n2;
```

```
    return result;
```

```
}
```

```
int div (int1, int2)
```

```
{
```

```
    int result;
```

```
    result = n1 / n2;
```

```
    return result;
```

```
}
```

Out put

Enter two no. : 12

14

$$12 + 14 = 26$$

$$12 - 14 = -2$$

$$12 * 14 = 168$$

$$12 \div 14 = 0$$

2

WAP to check whether an integer is prime or not using defined function.

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
int mul (int);
```

```
void main ()
```

```
{
```

```
    int a, rem;
```

```
    printf ("Enter a no.");
```

```
    scanf ("%d", &a);
```

```
    rem = mul (a);
```

```
    if (rem == 2)
```

```
    {
```

```
        printf ("Prime number");
```

```
    }
```

```
    else.
```

```
    {
```

```
        printf ("Not prime number");
```

```
    }
```

```
    getch();
```

```
}
```

```
int mul (int x)
```

```
{
```

```
    int count = 0, i; rem;
```

```
    for (i = 1; i <= x; i++)
```

```
    {
```

```
        rem = x % i;
```

```
        if (rem == 0)
```

```
        {
```

```
            count ++;
```

```
        }
```

```
    }
```

```
    return (count);
```

```
}
```

Output

Enter a number 12

12 Not prime number

3

WAP to print all the palindrome no. betⁿ the range entered by user using user defined function.

```
#include <stdio.h>
```

```
int check_palindrome (int number)
```

```
{
```

```
    int temp, remainder, rev = 0;
```

```
    temp = number;
```

```
    while (number != 0)
```

```
{
```

```
        rem = number % 10;
```

```
        rev = rev * 10 + rem;
```

```
        number /= 10;
```

```
}
```

```
    if (rev == temp) return 0;
```

```
    else return 1;
```

```
}
```

```
int main()
```

```
{
```

```
    int mainumber;
```

```
    printf("Enter the number: ");
```

```
    scanf("%d", &number);
```

```
    if (check_palindrome(number) == 0)
```

```
        printf("%d is palindrome no. \n", number);
```

```
    else.
```

```
        printf("%d is not palindrome no. \n", number);
```

```
    return 0;
```

```
}
```

Out put

Enter a number : 5

5 is a palindrome number

4

WAP to convert decimal no. to equivalent binary no. using user defined function.

include <stdio.h>

```
long decimal to binary (int decimalnum)
{
```

```
    long binary num = 0;
```

```
    int rem, temp = 1;
```

```
    while (decimalnum != 0)
```

```
    {
```

```
        rem = decimalnum % 2;
```

```
        decimalnum = decimalnum / 2;
```

```
        binary num = binary num + rem * temp;
```

```
        temp = temp * 10;
```

```
    }
```

```
    return binary num;
```

```
}
```

```
int main ( )
```

```
{
```

```
    int decimal num;
```

```
    printf ("Enter a decimal no: ");
```

```
    scanf ("%d", &decimalnum);
```

```
    printf ("Equivalent Binary no. is : %ld", decimal to  
        binary (decimalnum));
```

```
    return 0;
```

```
}
```

Output

Enter a Decimal no.: 5

Equivalent Binary no: 101.

5
KAP to calculate factorial of given no. using recursive function.

```
#include <stdio.h>
```

```
int find_factorial (int);
```

```
int main()
```

```
{
```

```
    int num, fact;
```

```
    printf("\n Enter any integer no. ");
```

```
    scanf("%d", &num);
```

```
    fact = find_factorial (num);
```

```
    printf("\n factorial of %d is: %d", num, fact);
```

```
    return 0;
```

```
}
```

```
int find_factorial (int n)
```

```
{
```

```
    if (n == 0)
```

```
        return (1);
```

```
    return (n * find_factorial (n-1));
```

```
}
```

Output
Enter any integer now: 5
Factorial of 5 is : 120

WAP to recursive function to generate Fibonacci series.

```
#include <stdio.h>
```

```
int Fibonacci (int);
```

```
int main()
```

```
{
```

```
    int n; i = 0, c;
```

```
    scanf ("%d", &n);
```

```
    printf ("Fibonacci series\n");
```

```
    for (c = 1; c <= n; c++)
```

```
    {
```

```
        printf ("%d\n", Fibonacci(i));
```

```
        i++;
```

```
    }
```

```
    return 0;
```

```
}
```

```
int Fibonacci (int n)
```

```
{
```

```
    if (n == 0)
```

```
        return 0;
```

```
    else if (n == 1)
```

```
        return 1;
```

```
    else
```

```
        return (Fibonacci (n-1) + Fibonacci  
                (n-2));
```

```
}
```

out put
5
Fibonacci series
0
1
2
3
4

Conclusion & Discussion.

In this fifth lab of C programming, we were able to use theoretical knowledge of ~~br~~ user defined function & recursive function. We learned to write the codes step by step in order to solve user defined function & recursive function problem.

We also learned to give proper structure to a program & execute & display a proper output.