Green University of Bangladesh
Department of Computer Science and Engineering(CSE)

Faculty of Sciences and Engineering

Semester: (Summer, Year:2022), B.Sc. in CSE (Day)

LAB REPORT NO :05

Course Title: Structured Programming Lab

Course Code: CSE 104 Section: DE

Student Details

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Submission Date : 14-Sep-22

Course Teacher's Name : Md. Parvez Hossain

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Lab Report Status

Marks: …… **Signature:.....**

Comments:..... **Date:.....**

Problem 01: Write a C program to find whether a given number is a prime number or not.

Code:

```c
#include<stdio.h>
int main()
{
    int num,count=0,i;
    printf("Enter a number to check prime or not prime number :");
    scanf("%d",&num);
    for(i=1;i<=num;i++)
    {
        if(num%i==0)
        {
            count++;
        }
    }
    if(count==2)
    {
        printf("Prime");
    }
    else
    {
        printf("Not prime");
    }
    return 0;
}
```

Output:

```
Enter a number to check prime or not prime number :13
Prime
Process returned 0 (0x0)   execution time : 4.066 s
Press any key to continue.
```

```
Enter a number to check prime or not prime number :10
Not prime
Process returned 0 (0x0)   execution time : 1.059 s
Press any key to continue.
```

Problem 02: Print Fibonacci series until a given number. For instance, if a user wants to print Fibonacci series until 1000,print all the Fibonacci number below 1000.

Code:

```c
#include<stdio.h>
int main()
{
    int t1=0,t2=1,n,sum=0;
    printf("Enter a integer:");
    scanf("%d",&n);
    printf("Fibonacci series: %d  %d  ",t1,t2);
    sum=t1+t2;
    while (sum<=n)
    {
        printf("%d ",sum);
        t1=t2;
        t2=sum;
        sum=t1+t2;
    }
return 0;
}
```

Output:

```
Enter a integer:12
Fibonacci series: 0  1  1 2 3 5 8
Process returned 0 (0x0)   execution time : 1.019 s
Press any key to continue.
```

Problem 03: Display Pascal's Triangle until a given row.

Code:

```c
#include <stdio.h>
int main() {
    int rows, coef = 1, space, i, j;
    printf("Enter the number of rows: ");
    scanf("%d", &rows);
    for (i = 0; i < rows; i++)
     {
       for (space = 1; space <= rows - i; space++)
          printf("  ");
       for (j = 0; j <= i; j++)
        {
          if (j == 0 || i == 0)
          {

             coef = 1;
          }
          else
          {

             coef = coef * (i - j + 1) / j;
          }
          printf("%4d", coef);
        }
       printf("\n");
    }
    return 0;
}
```

Output:

```
Enter the number of rows: 6
                1
              1   1
            1   2   1
          1   3   3   1
        1   4   6   4   1
      1   5  10  10   5   1

Process returned 0 (0x0)   execution time : 1.393 s
Press any key to continue.
```