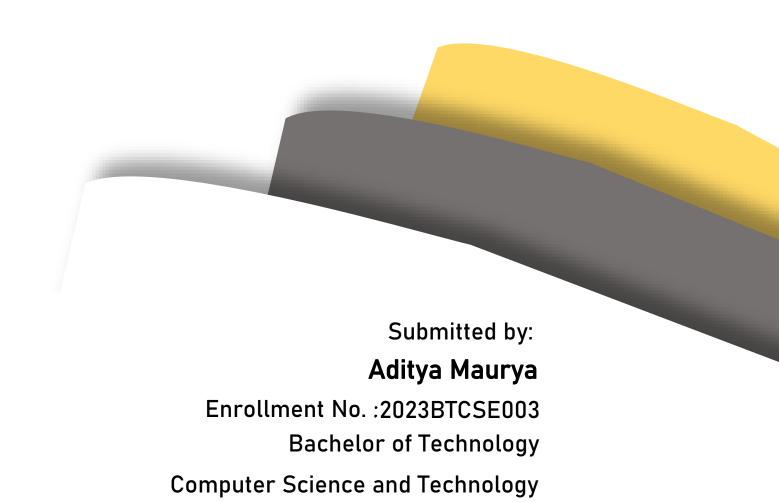


PROGRAMMING ASSIGNMENT

COUSE NAME: INTRODUCTION TO PROGRAMMING

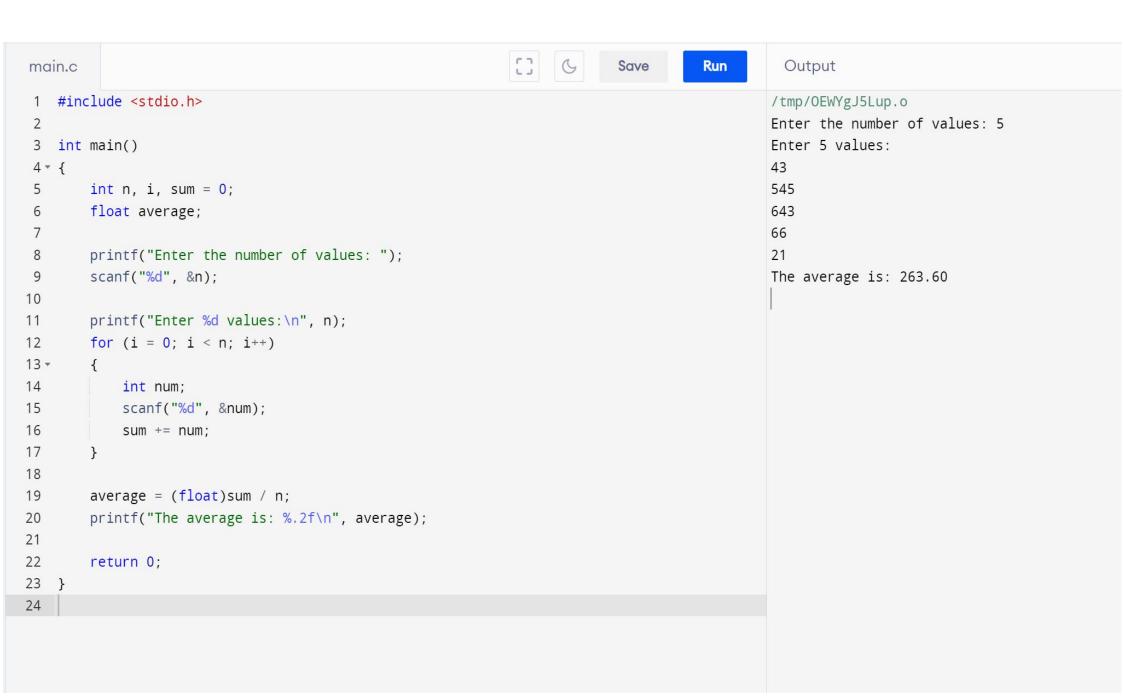


Q.1. Write a C program to print following series up to the n (Value of n will be given by user):

1 2 4 7 11 16 n

```
main.c
                                                                                               Output
                                                                          Save
                                                                                     Run
   #include <stdio.h>
                                                                                              /tmp/NQJM5nXSjj.o
                                                                                              Enter the value of n: 8
 3 int main()
                                                                                              Series: 1 2 4 7 11 16 22 29
 4 - {
        int n, i, term = 1, nextTerm = 1;
        printf("Enter the value of n: ");
        scanf("%d", &n);
 8
10
        printf("Series: ");
11
        for (i = 1; i \le n; i++)
12 -
13
            printf("%d ", term);
            nextTerm = term + i;
14
15
            term = nextTerm;
16
        }
17
18
        return 0;
19 }
```

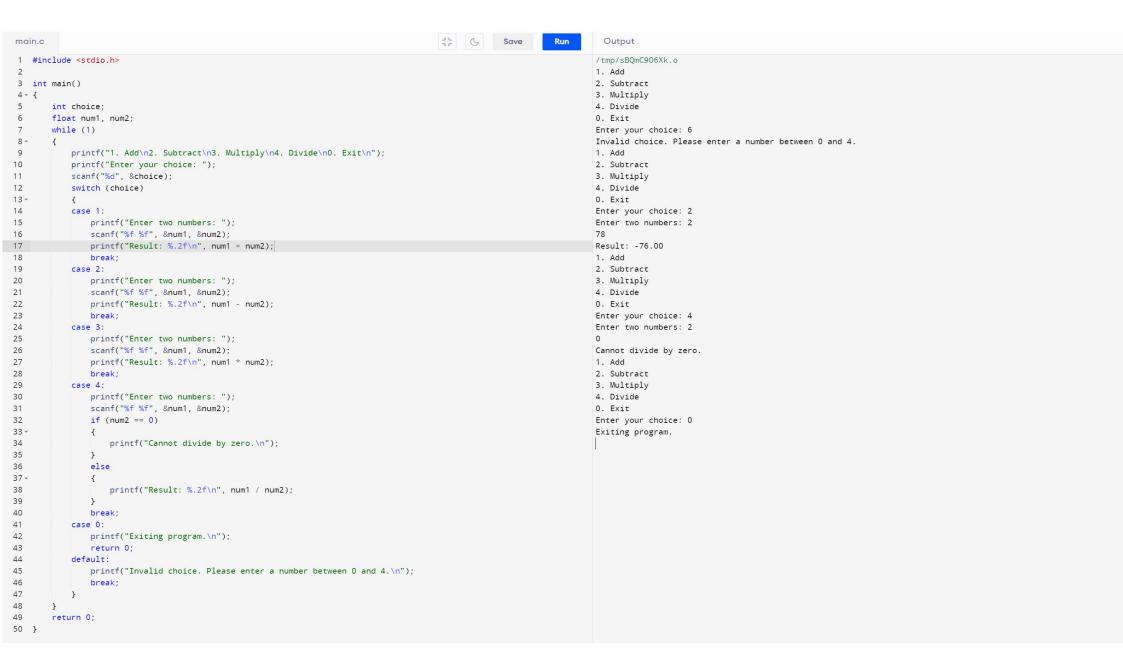
Q.2. Write a C program to calculate the average of n given number.



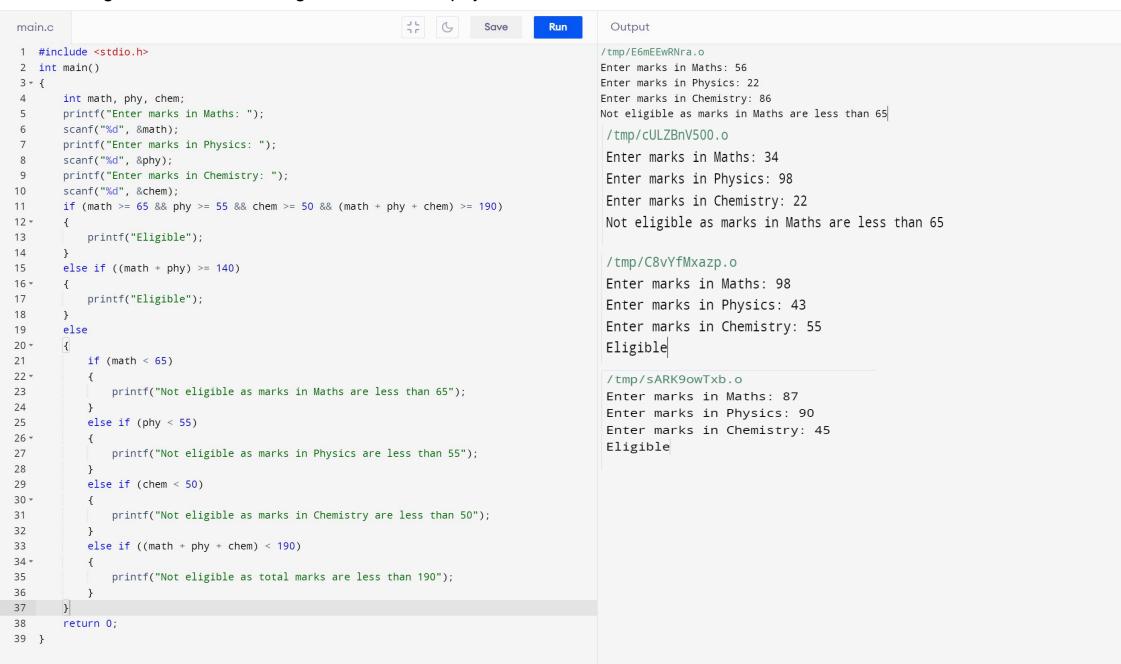
Q,3. Write a program that acts as a simple calculator. Prompt the user to enter two numbers and an operator (+, -, *, /) (Using switch).

```
Output
main.c
                                                                                            Save
                                                                                                       Run
1 #include <stdio.h>
                                                                                                                /tmp/TQsvduQRQy.o
                                                                                                                Enter the first number: 29
                                                                                                                Enter the second number: 5
3 * int main() {
        double num1, num2, result;
                                                                                                                Enter the operator (+, -, *, /): /
        char operator;
                                                                                                                Result: 5.80
                                                                                                                 /tmp/5WZ3eq7jKk.o
        printf("Enter the first number: ");
                                                                                                                 Enter the first number: 421
        scanf("%lf", &num1);
                                                                                                                 Enter the second number: 40
9
                                                                                                                 Enter the operator (+, -, *, /): #
        printf("Enter the second number: ");
10
                                                                                                                 ERROR!
        scanf("%lf", &num2);
11
                                                                                                                 Error: Invalid operator.
12
13
        printf("Enter the operator (+, -, *, /): ");
        scanf(" %c", &operator);
14
                                                                                                                 /tmp/1GOgrUQmIW.o
15
                                                                                                                 Enter the first number: 53
16 +
        switch (operator) {
                                                                                                                 Enter the second number: 0
            case '+':
17
                                                                                                                 Enter the operator (+, -, *, /): /
18
                result = num1 + num2:
                printf("Result: %.21f\n", result);
19
                                                                                                                 Error: Division by zero is not allowed.
                break;
20
            case '-':
21
                result = num1 - num2;
22
                printf("Result: %.21f\n", result);
23
                break;
24
25
            case '*':
26
                result = num1 * num2;
                printf("Result: %.21f\n", result);
27
28
                break;
            case '/':
29
30 -
                if (num2 != 0) {
                    result = num1 / num2;
31
                    printf("Result: %.21f\n", result);
32
33 *
34
                    printf("Error: Division by zero is not allowed.\n");
35
36
                break;
37
            default:
38
                printf("Error: Invalid operator.\n");
                break;
39
40
41
42
        return 0:
43 }
```

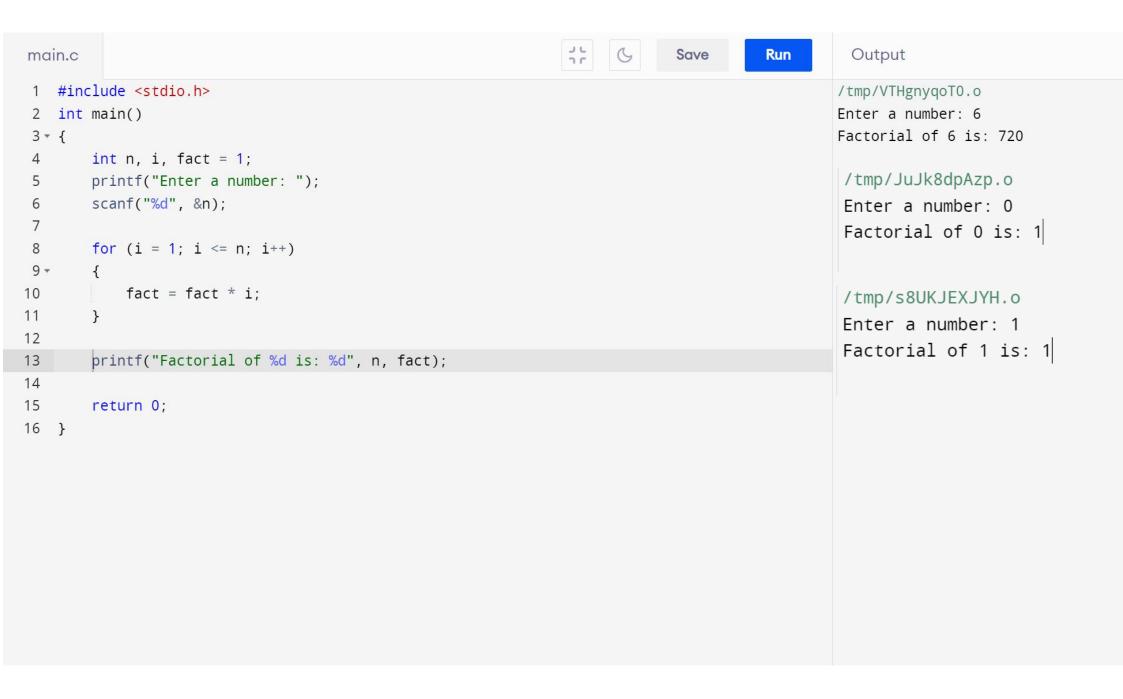
Q.4. Write a program that displays a menu with different options (e.g.,1. Add, 2. Subtract, 3. Multiply, 4. Divide). Prompt the user to select an option, and execute the corresponding operation based on the users choice repeat the process until user enter 0 to stop the program.



Q.5. Write a C program to determine eligibility for admission to a professional course based on the following criteria: Marks in Maths >=65 and Marks in Phy >=55 and Marks in Chem >=50 and Total in all three subject >=190 or Total in Math and Physics >=140 Display whether the candidate is eligible or not? If candidate is not eligible than give the reason for that as well; Eg. Candidate is not eligible as marks in physics are less than 55.



Q. 6. Write a C program to compute the factorial of any given number.



Q. 7. Write a C program to check whether number is prime or not prime.

