

PROGRAMMING FUNDAMENTAL LAB

SUBMITTED TO: SIR BILAL DAR
SUBMITTED BY: MAIRA EMAAN NASIR

REG NO: 2430-0153

LAB TASK: 05

Question: 01

Write a program to print the numbers from 1 to 5 using a for loop.

CODE:

OUTPUT:

```
Output

/tmp/INOmUtwhMU.o

1
2
3
4
5

=== Code Execution Successful ===
```

Question: 02

Write a program to find the sum of the first n numbers. The value of n should be provided by the user.

```
Run
main.cpp
 1 #include <iostream>
 2 using namespace std;
 3 - int main() {
 4
       int n;
 5
       cout<<"Enter a natural number"<<"\n";</pre>
 6
       cin>>n;
 7
      int sum;
 8
     for (int i =1;i<=n;i++)
 9 -
10
           sum =sum+i;
           cout<<sum<<"\n";</pre>
11
12
       return 0;
13
14 }
15
```

```
Output

/tmp/anHwA8dIhA.o
Enter a natural number
9
1
3
6
10
15
21
28
36
45
=== Code Execution Successful ===
```

Question: 03

Write a program that takes a number user enter 5.

```
≪ Share

                                                                              Run
main.cpp
1 #include <iostream>
2 using namespace std;
3 - int main() {
4
       int num;
5
       cout<<"Enter a number"<<"\n";</pre>
6
        cin>>num;
7
       int sum;
8
       for (int i =1;i<=10;i++)
9 +
10
            cout<<num<<"x"<<i<<"="<<num*i<<"\n";
11
        }
        return 0;
12
13 }
```

```
Output
                                                                                  Clear
/tmp/vVGfwaklxo.o
Enter a number
7
7x1=7
7x2=14
7x3=21
7x4=28
7x5 = 35
7x6 = 42
7x7=49
7x8=56
7x9=63
7x10=70
=== Code Execution Successful ===
```

Question: 04

Write a program that prints..... using for loop.

```
[] ← Share
                                                                         Run
main.cpp
1 #include <iostream>
2 using namespace std;
 3 - int main() {
 4 -
       for (int i =1; i \le 20; i++){
 5
 6 =
          if (i %2==0){
 7
              cout<<i<"\n";
 8
          }
9
       }
10
       return 0;
11 }
```

```
Output

/tmp/neYaUYaOMp.o
2
4
6
8
10
12
14
16
18
20
=== Code Execution Successful ===
```

Question: 05

Write a program that prints the number..... 10 to 1.

```
Output

/tmp/v0cnpYguQB.o

10 9 8 7 6 5 4 3 2 1

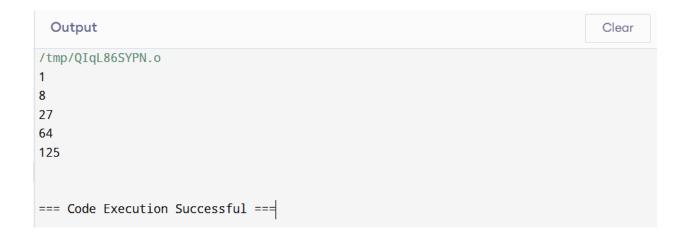
=== Code Execution Successful ===
```

Question: 06

Write a program in C++ to display the cube of the number up to an integer.

CODE:

OUTPUT:



Question: 07

Display the corresponding grade for each student based on the entered marks. Display the appropriate grade.

```
[] G Share
main.cpp
                                                                                        Run
 1 #include <iostream>
 2 using namespace std;
 3 - int main() {
 4
         int n,i ,marks;
 5
         int sum=0;
         cout<<"Enter the number of subjects;"<<"\n";</pre>
 6
 7
         cin>>n;
 8 -
        for(int i=1;i<=n;i++){</pre>
 9
             cout<<"Enter the number:"<<"\n";</pre>
10
             cin>>marks;
11
             sum=sum+marks;
12
         }
13
         float average=sum/n;
14 cout<<"Average:"<<average<<"\n";</pre>
15 -
         if(average>=90&&average<=100){</pre>
16
         cout<<"Grade A+";</pre>
17
18 -
         else if (average>=80&&average<=90){</pre>
19
         cout<<"Grade A";</pre>
20
21 -
         else if (average>=70&&average<=80){</pre>
         cout<<"Grade B";</pre>
22
23
24 -
         else if (average>=60&&average<=70){</pre>
25
         cout<<"Grade C";</pre>
         cout<<"Grade C";</pre>
25
26
         }
         else
27
28
         cout<<"Grade F";</pre>
29
         }
```

```
Output

/tmp/ri7ESvvIPJ.o
Enter the number of subjects;
6
Enter the number:
90
Enter the number:
95
Enter the number:
69
Enter the number:
78
Enter the number:
98
Enter the number:
98
Enter the number:
85
Average:85
Grade A
=== Code Execution Successful ===
```