

Introduction to Programming

Fall 2020

Practical sheet (Loops)

1. Write a program in C++ to find the sum of first 7 natural numbers.

Example

Inputs: **1 2 3 4 5 6 7**

Output: **28**

2. Write a program in C++ using WHILE to display n terms of natural number and their sum

Example

Input a number of terms: **5**

The natural numbers up to 5th terms are:

Inputs: **1 2 3 4 5**

Output: **15**

3. Write a program in C++ to print a square pattern with & character

Example

Input the number of characters for a side: **4**

Output:

& & & &

& & & &

& & & &

& & & &

4. Write a program in C++ to make such a pattern like a pyramid with an asterisk

Example

Input number of rows: **5**

Output

```
  *
 * *
* * *
* * * *
* * * * *
```

5. Write a program in C++ to print the following pattern

Example

Input number of rows: 5

Output

```
& & & & &
& & & &
& & &
& &
&
```

6. Write a program in C++ to print the following pattern

Example

Input

Input number of rows: 5

Output

```
& & & & &
& & & &
& & &
& &
&
& &
& & &
& & & &
& & & & &
```

7. Write a C++ program to input a number from user and find reverse of the given number using Do.. While.

Example

Input

Input number: 12345

Output

Reverse of 12345 = 54321

8. Write a C++ program to find sum of all odd numbers from 1 to n using for loop.

Example

Input

Input upper limit: 10

Output

Sum of odd numbers from 1-10: 25

9. Write a C++ program to input number from user and find sum of all even numbers between 1 to n using while loop.

Example

Input

Input upper limit of even number: 10

Output

Sum of even numbers between 1 to 10: 30

10. Write a C program to input a number from user and print multiplication table of the given number using for loop.

Example

Input

Input num: 5

Output

```
5 * 1  = 5
5 * 2  = 10
5 * 3  = 15
5 * 4  = 20
5 * 5  = 25
5 * 6  = 30
5 * 7  = 35
5 * 8  = 40
5 * 9  = 45
5 * 10 = 50
```