Level 1 Practice Programs

1. Write a program to check if a number is divisible by 5

I/P => number

O/P => Is the number \_\_\_ divisible by 5? \_\_\_

1. Write a program to check if the first is the smallest of the 3 numbers.

I/P => number1, number2, number3

O/P => Is the first number the smallest? \_\_\_\_

1. Write a program to check if the first, second, or third number is the largest of the three.

I/P => number1, number2, number3

O/P =>

Is the first number the largest? \_\_\_\_

Is the second number the largest? \_\_\_

Is the third number the largest? \_\_\_

1. Write a program to check for the natural number and write the sum of n natural numbers

**Hint =>**

1. A Natural Number is a positive integer (1,2,3, etc) sometimes with the inclusion of 0
2. A sum of n natural numbers is n \* (n+1) / 2

I/P => number

O/P => If the number is a positive integer then the output is

The sum of \_\_\_ natural numbers is \_\_\_

Otherwise

The number \_\_\_ is not a natural number

1. Write a program to check whether a person can vote, depending on whether his/her age is greater than or equal to 18.

**Hint =>**

1. Get integer input from the user and store it in the age variable.
2. If the person is 18 or older, print "The person can vote." Otherwise, print "The person cannot vote."

I/P => age

O/P => If the person's age is greater or equal to 18 then the output is

The person's age is \_\_\_ and can vote.

Otherwise

The person's age is \_\_\_ and cannot vote.

1. Write a program to check whether a number is positive, negative, or zero.

**Hint =>**

1. Get integer input from the user and store it in the number variable.
2. If the number is positive, print positive.
3. If the number is negative, print negative.
4. If the number is zero, print zero.
5. Write a program SpringSeason that takes two int values month and day from the command line and prints “Its a Spring Season” otherwise prints “Not a Spring Season”.

**Hint =>**

1. Spring Season is from March 20 to June 20
2. Write a program to count down the number from the user input value to 1 using a ***while*** loop for a rocket launch

**Hint =>**

1. Create a variable counter to take user inputted value for the countdown.
2. Use the ***while*** loop to check if the counter is 1
3. Inside a ***while*** loop, print the value of the counter and decrement the counter.
4. Rewrite program 8 to do the countdown using the ***for-***loop
5. Write a program to find the sum of numbers until the user enters 0

**Hint =>**

1. Create a variable total of type double initialize to 0.0. Also, create a variable to store the double value the user enters
2. Use the ***while*** loop to check if the user entered is 0
3. If the user entered value is not 0 then inside the while block add user entered value to the total and ask the user to input again
4. The loop will continue till the user enters zero and outside the loop display the total value
5. Rewrite the program 10 to find the sum until the user enters 0 or a negative number using ***while*** loop and break statement

**Hint =>**

1. Use infinite while loop as in while (true)
2. Take the user entry and check if the user entered 0 or a negative number to break the loop using break;
3. Write a program to find the sum of n natural numbers using ***while*** loop compare the result with the formulae n\*(n+1)/2 and show the result from both computations was correct.

**Hint =>**

1. Take the user input number and check whether it's a Natural number
2. If it's a natural number Compute using formulae as well as compute using ***while*** loop
3. Compare the two results and print the result
4. Rewrite the program number 12 with the ***for*** loop instead of a while loop to find the sum of n Natural Numbers.

**Hint =>**

1. Take the user input number and check whether it's a Natural number
2. If it's a natural number Compute using formulae as well as compute using ***for*** loop
3. Compare the two results and print the result
4. Write a Program to find the factorial of an integer entered by the user.

**Hint =>**

1. For example, the factorial of 4 is 1 \* 2 \* 3 \* 4 which is 24.
2. Take an integer input from the user and assign it to the variable. Check the user has entered a positive integer.
3. Using a ***while*** loop, compute the factorial.
4. Print the factorial at the end.
5. Rewrite program 14 using for loop

**Hint =>**

1. Take the integer input, check for natural number and determine the factorial using for loop and finally print the result.