Con	dition	al State	ements
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- 1. Programs to be done by learner's to demonstrate their readiness with "Conditional statements"
 - **a.**Write a program to accept a number N and print whether the number is EVEN or ODD.
 - ${\bf b.}{\rm Write}$ a program to accept two numbers and print whether their sum is EVEN or ODD

Looping or iterative Statements

- 2. Programs to be done by learner's to demonstrate their readiness with "Looping constructs"
 - **c.** Write a program to print all numbers from 1 to 100 i.e. 1 2 3 4 5 6 7 ... 98 99 100
 - **d.** Write a program to print alternate numbers starting from 1 to 99 i.e. 1 3 5 7 9 11 13 ... 95 97 99
 - **e.** Write a program to print alternate numbers starting from 0 to 100 i.e. 0 2 4 6 8 $10\ 12\dots96\ 98\ 100$
 - **f.** Write a program to print all numbers backwards from 100 to 0 i.e. 100 99 98 97 $96 \dots 43210$
 - **g.** Write a program to print numbers backwards from 100 to 1 by skipping 2 numbers i.e. 100 97 94 91 88 85 82 79... 22 19 16 13 10 7 4 1
- 3. Print the below shape on a browser window [10 rows right-angled left justified numbers]

1

12

123

1234

12345

123456

1234567 12345678

123456789

123430707

12345678910

4. Print the below shape on a console window [10 rows right-angled right-justified stars]

*** **** ****

In the Martian land faraway, a new virus has evolved and is attacking the individuals at a fast pace. The scientists have figured out the virus composition, V. The big task is to identify the people who are infected. The sample of N people is taken to check if they are POSITIVE or NEGATIVE. A report is generated which provides the current blood composition B of the person.

POSITIVE or NEGATIVE?

If the blood composition of the person is a subsequence of the virus composition V, then the person is identified as POSITIVE otherwise NEGATIVE.

Example:

Virus Composition, V = coronavirus

Blood Composition of the person, B = ravus

The person in question is POSITIVE as B is the subsequence of the V.

The scientists are busy with their research for medicine and request you to build a program which can quickly figure out if the person is POSITIVE or NEGATIVE. They will provide you with the virus composition V and all the people's current

blood composition. Can you help them?

Note: The virus and blood compositions are lowercase alphabet strings.

Functions

Ramesh, a school student, was bored at home in the pandemic. He wanted to play but there was no one to play with. He was doing some mathematics questions including prime numbers and thought of creating a game using the same. After a few days of work, he was ready with his game. He wants to play the game with you. GAME:

Ramesh will randomly provide you a range [L , R] (both inclusive) and you have to tell him the maximum difference between the prime numbers in the given range. There are three answers possible for the given range.

- 1. There are two distinct prime numbers in the given range so the maximum difference can be found.
- 2. There is only one distinct prime number in the given range. The maximum difference in this case would be 0.
- 3. There are no prime numbers in the given range. The output for this case would be -1.

To win the game, the participant should answer the prime difference correctly for the given range.

Example:

Range: [1, 10]

The maximum difference between the prime numbers in the given range is 5.

Difference = 7 - 2 = 5

Range: [5, 5]

There is only one distinct prime number so the maximum difference would be 0.

Range: [8, 10]

There is no prime number in the given range so the output for the given range would be -1.

Can you win the game?

Classes

7.	

List of JavaScript Programs to be Implemented