

Practice questions

Input/ Output

- Write a program to calculate area of triangle.
- Write a program to take user's name and age as input and print a greeting message.
- Write a program to swap values of two variables.
- Write a program to calculate average of three numbers taken as input
- Write a program to convert temperature from celsius to kelvin
- Write a program that converts hours into seconds.

Conditional statements

- Write a program to check if a number is odd or even
- Write a program to check if a number is negative, positive or zero.
- Write a program to display if a number is divisible by 3, 5 or both.
- Write a program to check if given year is leap year or not.

Loop

- Write a program that prints first 10 even numbers.
- Write a program to generate fibonacci series to given number of terms.
- Write a program to calculate factorial of a number.
- Write a program to calculate sum of digits of a given number.
- Write a program to check if a given number is prime or not.
- Write a program to display multiplication table of given number. (upto times 10)
- Write a program to print all prime numbers between 1 and 100.
- Write a program to convert a given number(base 10) into binary, octal and hexadecimal.

Pattern printing

- Write a program to generate the following pattern:

```
1
11
111
1111
11111 to n levels
```

- Write a program to generate the following pattern:

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

```
****
***** to n levels
```

- Write a program to generate the following pattern:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5 to n levels
```

- Write a program to generate the following pattern:

```
      1
     1 2
    1 2 3
   1 2 3 4
  1 2 3 4 5 to n levels
```

- Write a program to generate the following pattern:

```
*
***
*****
*****
***** to n levels
```

- Write a program to generate:

```
      *
     ***
    *****
   *****
  ***** to n levels
```

Array

- Write a program to find maximum value from an array.
- Write a program to find minimum value from an array.
- Write a program to find sum and average of elements of an array.
- Write a program to find the product of all elements in an array.
- Write a program to find if a array is pallindrome.
- Write a program to find sum of all positive numbers in an array.

- Write a program that displays reverse of array provided as argument.
- Write a program to store negative numbers in an array in a different array and display it.
- Write a program to sort a given array using bubble sort.

Function

- Implement all the questions above as functions.
- Implement a function that takes constant (a,b,c) of quadratic equation($ax^2 + bx + c$) and displays roots.
- Write a function that takes in a number as input and return a boolean value indicating whether it is armstrong number or not.
 - Armstrong numbers are equal to the sum of its own digits, each raised to a power equal to the number of digits in the number.
- Write a function that returns hcf of given two numbers.
- Write a function that returns lcm of given two numbers.
- Write functions to convert decimal to binary, octal and hexadecimal.
- Write a function to calculate factorial of a number using recursion.