**List of Programs to practice**

**Python Programs**

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| **S.No** | **Program Description** |
|  | Illustrate data types: int, float, bool, complex |
|  | Illustrate String literals and escape sequences |
|  | Illustrate Arithmetic Operators |
|  | Illustrate Logical Operators |
|  | Illustrate Relational Operators |
|  | Illustrate Bitwise Operators |
|  | Illustrate Identity Operators |
|  | Illustrate Precedence of Operators |
|  | Illustrate Associativity of operators |
|  | Illustrate Membership operators |
|  | Illustrate List: insertion, appending, removing, Indexing, Slicing, Mutability, predefined operations |
|  | Illustrate Tuple: Indexing, Slicing, Immutability, predefined operations |
|  | Illustrate Dictionary: insertion, appending, removing, Key, values, retrieving, predefined operations |
|  | Illustrate String: Indexing, Slicing, Immutability, predefined operations |
|  | Illustrate Sets: insertion, removing, predefined operations |
|  | Illustrate math: sqrt(), ceil(), floor(), pow(), fabs(), sin(), cos(), tan() |
|  | Illustrate random: random(), randint(), randrange() |
|  | Illustrate statistics: mean(), median(), mode(), pstdev(), pvariabce(), stdev(), variance() |
|  | Write a program to compute BMI of a person. Body mass index (BMI) is a person’s weight in kilograms divided by the square of height in meters. |
|  | Write a program to find areas of circle, rectangle and triangle |
|  | Write a Program to find simple interest |
|  | Write a program to find roots of a quadratic equation |
|  | Write a program to find whether a no. is even or odd |
|  | Write a program to find whether a person is eligible to vote or not. |
|  | Write a program to find biggest of two numbers |
|  | Write a program to find biggest of three number without using logical operators |
|  | Write a program to find biggest of four number without using logical operators |
|  | Write a program to find biggest of three number using logical operators |
|  | The program should display a message indicating whether the person is an infant, a child, a teenager, or an adult. Following are the guidelines:   * If the person is 1 year old or less, he or she is an infant. * If the person is older than 1 year, but younger than 13 years, he or she is a child. * If the person is at least 13 years old, but less than 20 years old, he or she is a teenager.   If the person is at least 20 years old, he or she is an adult. |
|  | Write a program using while loop to print your name ‘n’ times |
|  | Write a Python Program to find Strong Number. |
|  | Write a program to find prime nos between lower limit and upper limit |
|  | Write a Python Program to find whether a number is Perfect Number |
|  | Write a Python Program to find whether year is a leap year or not |
|  | Write a Python Program to find sum of digits of a positive number |
|  | Write a Python Program to reverse a number. |
|  | Write a program to compute Miles-per-Gallon expression: A car's miles-per-gallon (MPG) can be calculated with the following formula: MPG=Miles driven÷Gallons of gas used. |
|  | Write a program in Python to compute GCD of given numbers |
|  | Write a program in Python to find the simple interest |
|  | Write a program to compute the factorial of a given positive number |
|  | Write a program to find whether a no. is prime or not |
|  | Write a program in Python to find whether the no is positive, negative or zero |
|  | Write a program to find whether a no. is Armstrong number |
|  | Write a program in Python to find biggest of two nos |
|  | Draw a flow chart to find the smallest of two nos |
|  | Write a program in Python to find smallest of three nos |
|  | Write a program to display the below pattern, for n=4:  1  2 2  3 3 3  4 4 4 4 |
|  | Write a program to display the below pattern, for n=4:  1  2 2  3 3 3  4 4 4 4 |
|  | Write a program to display the below pattern, for n=4:  1 1 1 1  2 2 2  3 3  4 |
|  | Write a program to display the below pattern, for n=4:  1 1 1 1  2 2 2 2  3 3 3 3  4 4 4 4 |
|  | Write a program to display the below pattern, for n=4:  4 4 4 4  3 3 3 3  2 2 2 2  1 1 1 1 |
|  | Write a program to display the below pattern, for n=4:  1 2 3 4  1 2 3  1 2  1 |
|  | Write a program to display the below pattern, for n=4:  4 4 4 4  3 3 3  2 2  1 |
|  | Write a program to display the below pattern, for n=4:  1  2 2 2  3 3 3 3 3  4 4 4 4 4 4 4 |
|  | Write a program to display the below pattern, for n=4:  1  2 2 2  3 3 3 3 3  4 4 4 4 4 4 4  3 3 3 3 3  2 2 2  1 |
|  | Write a program to display the below pattern, for n=4:  1  2 2  3 3 3  4 4 4 4 |
|  | Write a program to display the below pattern, for n=4:  \* \* \*  \* \*  \*  \* |
|  | Write a program to find whether a string is palindrome |
|  | Write a program to reverse the number. Input: 123 output: 321 |
|  | Illustrate precedence rules |
|  | Illustrate String: any 4 operations |
|  | Write a program to display the below pattern, for n=4:  \*  \* \*  \* \* \*  \* \* \* \* |
|  | Write a program to display the below pattern, for n=4:  1  1 2  1 2 3  1 2 3 4 |
|  | Write a program to convert Celsius to Fahrenheit. **F = (9/5) C+32** |
|  | Write a program in Python to convert Fahrenheit to Celsius. C = (F − 32) x 5/9 |
|  | Illustrate mutability of Lists |
|  | Illustrate immutability of strings |
|  | Write a program to print multiplication table. |
|  | The area of a rectangle is the rectangle’s length times its width. Write a program in Python that asks for the length and width of two rectangles. The program should tell the user which rectangle has the greater area, or if the areas are the same. |
|  | Illustrate immutability of tuples |
|  | Implement recursive Linear Search |
|  | Implement iterative Linear Search |
|  | Implement recursive Binary Search |
|  | Implement iterative Binary Search |
|  | Implement Bubble Sort |
|  | Implement Selection Sort |
|  | Implement Matrix Multiplication |
|  | Implement Matrix Addition |
|  | Illustrate any 5 methods on lists |
|  | Illustrate any 5 methods on Strings |
|  | Illustrate any 5 methods on Dictionary |
|  | Demonstrate accumulation on a list |
|  | Demonstrate Dictionary accumulation |
|  | Find factorial of a given number using recursion and iteration |
|  | Find nth Fibonacci number using recursion |
|  | Write a program to read the contents of a file and count the unique characters |
|  | Write a program to copy the contents source file to destination file line by line |
|  | Demonstrate any five functions of numpy module. |
|  | Implement stack and basic operations |
|  | Implement queue and basic operations |
|  | Implement linked list and basic operations. |
|  | Write a function to read ‘n’ elements and return minimum, maximum and average of the list of elements. |
|  | Write a program to demonstrate + and \* operators on top of sequences |
|  | Write a program in python to determine the unique words and their frequency in a given string |
|  | Write a program to find the size of a text file |
|  | Illustrate the usage of tell() and seek() functions |
|  | Build a dictionary with name and phone nos. Search whether a given mobile no. is present in the dictionary, it is present display the mobile no and name otherwise report entry missing |