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| **Sl. No** | **Topic** | **Program Assignment** |
| 1 | Python program Basics | Write a program to Add, Subtract, Multiply, and Divide 2 numbers |
| 2 | Basic Operators | Write a program to find the biggest of 3 numbers (Use If Condition) |
| 3 | Basic Operators | Write a program to find given number is odd or Even |
| 4 | Basic Operators | Write a program to find the number is Prime or not. |
| 5 | Command line Arguments | Write a program to receive 5 command line arguments and print each argument separately. Example: >> python test.py arg1 arg2 arg3 arg4 arg5 a) From the above statement your program should receive arguments and print them each of them.  b) Find the biggest of three numbers, where three numbers are passed as command line arguments. |
| 6 | Basic String operations | Write a program to read string and print each character separately.     a) Slice the string using slice operator [:] slice the portion the strings to create a sub strings.     b) Repeat the string 100 times using repeat operator \*     c) Read string 2 and concatenate with other string using + operator. |
| 7 | Basic LIST Operations | Create a list with at least 10 elements having integer values in it;        Print all elements        Perform slicing operations        Perform repetition with \* operator        Perform concatenation with other list. |
| 8 | Basic of Tuple | Repeat program 7 with Tuples (Take example from Tutorial) |
| 9 | Python Numbers | Write program to Add, Subtract, Multiply, Divide 2 Complex numbers. |
| 10 | Assignment Operator | Using assignment operators, perform following operations Addition, Substation, Multiplication, Division, Modulus, Exponent and Floor division operations |
| 11 | Bitwise Operator | Read 2 numbers to variable a and b and perform all bitwise operations on that numbers. |
| 12 | Comparison operator | Read 10 numbers from user and find the average of all. a) Use comparison operator to check how many numbers are less than average and print them b) Check how many numbers are more than average. c) How many are equal to average. |
| 13 | Decision making (IF constructs) | Write a program to find the biggest of 4 numbers.    a) Read 4 numbers from user using Input statement.    b) extend the above program to find the biggest of 5 numbers. (PS: Use IF and IF & Else, If and ELIf, and Nested IF) |
| 14 | Python List functions and Methods | Write a program to create two list A & B such that List A contains Employee Id, List B contain Employee name (minimum 10 entries in each list) & perform following operation      a) Print all names on to screen      b) Read the index from the  user and print the corresponding name from both list.      c) Print the names from 4th position to 9th position      d) Print all names from 3rd position till end of the list      e) Repeat list elements by specified number of times (N- times, where N is entered by user)      f)  Concatenate two lists and print the output.      g) Print element of list A and B side by side.(i.e. List-A First element, List-B First element ) |
| 15 | Python List functions and Methods | Create a list of 5 names and check given name exist in the List.         a) Use membership operator (IN) to check the presence of an element.         b) Perform above task without using membership operator.         c) Print the elements of the list in reverse direction. |
| 16 | Python Numbers | Write program to perform following:      i) Check whether given number is prime or not.     ii) Generate all the prime numbers between 1 to N where N is given number. |
| 17 | Decision making (If styles) | Write program to find the biggest and Smallest of N numbers.       PS: Use the functions to find biggest and smallest numbers. |
| 18 | Looping Structure | Using loop structures print numbers from 1 to 100.  and using the same loop print numbers from 100 to 1 (reverse printing) a) By using For loop  b) By using while loop c) Let mystring ="Hello world"  print each character of mystring in to separate line using appropriate loop structure. |
| 19 | Looping Structure | Using loop structures print even numbers between 1 to 100.   a) By using For loop, use continue/ break/ pass statement to skip odd numbers.  i) Break the loop if the value is 50  ii) Use continue for the values 10,20,30,40,50  b) By using while loop, use continue/ break/ pass statement to skip odd numbers.   i) Break the loop if the value is 90       ii) Use continue for the values 60,70,80,90 |
| 20 | Looping Structure | Write a program to generate a Fibonacci series of numbers. Starting numbers are 0 and 1,  new number in the series is generated by adding previous two numbers in the series. Example : 0, 1, 1, 2, 3, 5, 8,13,21,.....    a) Number of elements printed in the series should be N numbers, Where N is any +ve integer.    b) Generate the series until the element in the series is less than Max number. |