#### **Scenario:** A program needs to find the second largest number in a given list of numbers. Write logic to find the second largest number in a given list.

**Ramishahope Artificial Intelligence Pvt Ltd**

**36, Old Anandas, SG Arcade, Marudhamalai Main Road, Vadavalli, Coimbatore -641041.**

**+91 6385383227 | [www.hopelearning.net](http://www.hopelearning.net/) | [mdaravind@hopelearning.net](mailto:mdaravind@hopelearning.net) | 33AAMCR3722R1ZU**

**Logic:**

**\*Enter the list of numbers**

**\*Using sorting method , we can find second largest number by checking [2] element**

#### **Scenario:** A function needs to convert an integer to its binary representation without using Python’s built-in bin() function.

#### Write logic to convert a given integer to its binary representation.

#### Logic:

#### **\*Get a integer from user.**

**\*By using condition : if integer less than zero and loop function : integer should be modulus of 2 and store it in new variable.**

**\*In looping , it will store remainder value of integer.**

#### **Scenario:** A function needs to merge two sorted lists into a single sorted list efficiently. Write logic to merge two sorted lists into one sorted list.

**Logic:**

**\*Enter a sort list 1 and 2.**

**\*Using appends () function merge two sorted list into one list**

#### **Scenario:** A function needs to find the first non-repeating character in a string for text processing. Write logic to find the first non-repeating character in a given string.

**Logic:**

**Get a string value from user.  
 Count each character from string and if count less than equal to one. Without iteration print the first character**

#### **Scenario:** A program needs to identify common elements between two lists for data filtering. Write logic to find the common elements between two lists.

**Logic:**

**\*create a elements of list1 and list2.**

**\*Using ‘&’(intersection) combine both list 1 and 2**

**\*It will give common element from list**

#### **Scenario:** A function is required to reverse a given number. Write logic to reverse a given number.

**Logic:**

**Get an list of number from user.  
 Using reverse function [::-1] , we can reverse the list of given elements and assign this value to new variable**

**Print new variable**

#### **Scenario:** A program needs to count the number of words in a given sentence. Write logic to count the number of words in a given sentence.

**Logic:**

**Convert sentence into string**

**By using count function, we can count number of words in sentence**

#### **Scenario:** A function needs to compute the factorial of a number using iteration instead of recursion. Write logic to find the factorial of a given number using iteration.

**Logic:**

**Assign fact value to 1**

**Get a value n from user, it should iterate in range(1,n)**

**Using loop function , iterate fact value multiple of 1 until n value given by user**

#### **Scenario:** A program is required to convert all strings in a list to uppercase. Write logic to convert all strings in a list to uppercase.

**Logic:**

**Enter a string value and store into variable X**

**Now Using upper() function, convert string to uppercase(X.upper())**

#### **Scenario:** A function is needed to compute the greatest common divisor (GCD) of two numbers using the Euclidean algorithm. Write logic to calculate the GCD of two numbers using the Euclidean algorithm.

**Logic:**

**Get two numbers from user.**

**Divide large number(a) by small number(b) and store remainder (r)value.**

**Next step replace a with b and b with r . Iterate the step until remainder zero.**

**If remainder is zero , before non-zero value in GCD.**