1. **Scenario:** A user is required to enter a valid number in a form, but users sometimes input invalid data.

   Write logic to repeatedly prompt the user until they enter a valid integer.

   Answer: Follow the below steps:
   - Get the input from the users using **input ()** function.
   - Using **if condition** we can check whether the datatype of the input value is **int**.
   - If the input value is not int dtype then prompt them using a **print** statement **" Please enter valid data"**

2. **Scenario:** A data analysis tool processes a list of numbers and needs to identify the most frequently occurring value.

   Write logic to find the most frequently occurring number in a given list.

   Answer: Follow the below steps:
   - Get the list from the user or use the predefined list.
   - Use the **for loop** to check each number.
   - Use the **Count** to count how many times each number appears in the list.
   - Now you will see the number with the highest count and print it using **print** statement.

3. **Scenario:** A text-processing application needs to compare words and check if they are anagrams (contain the same letters in a different order).

   Write logic to determine whether two given strings are anagrams.

   Answer: Follow the below steps:
   - Get the 2 inputs from the users using **input ()** function.
   - Name it as Str1 and Str2.
   - Using **if condition** check whether the **Str1** == **sorted(Str2)**
   - If it is true then it is **Anagram** else it is not Anagram

4. **Scenario:** A speech analysis program needs to count the number of vowel sounds in a given input.

   Write logic to count the number of vowels in a given string.

   Answer: Follow the below steps:
   - First initialize the Vowels as a **List.**
   - Then get the Word from the user using **input ()** function.
   - Make the count as 0
   - Use **for loop** to fetch each letter from the user input.
   - Check with **if condition** that letter is **in** the vowels
   - If the condition is true then it should get added to the count.
   - Finally show the answer using **print** statement.

5. **Scenario:** A text-editing software includes a feature to reverse the order of words in a sentence for stylistic effects.

   Write logic to reverse the order of words in a sentence while keeping the words themselves intact.

   Answer: Follow the below steps:
   - Get the input from the User using **input ()** function.
   - Split the sentences into a list of words
   - Now Reverse the order of the words in the list.
   - Finally join the reversed list back into a sentence.
   - At the end, display the final sentence using **print** statement.

6. **Scenario:** An ATM machine processes withdrawal requests and needs to ensure that users cannot withdraw more than their account balance.

   Write logic to allow a withdrawal only if the balance is sufficient.

   Answer: Follow the below steps:
   - Get the Balance amount and the Withdrawal amount from the user using **input ()** function.
   - Using **if condition** check if the Withdrawal amount is less than Balance amount then the user can proceed to withdraw the amount.
   - If not then we need to alert them to "**Enter less amount"** using **print** statement.

7. **Scenario:** A system needs to verify whether a given dataset contains duplicate entries.

   Write logic to check whether a given list contains duplicate values.

   Answer: Follow the below steps:
   - Get the list from the user using **input ()** function.
   - Convert the list into a **set** as it will automatically removes the duplicates.
   - Now compare the length of the set with the length of the list using **if condition**.
   - If the lengths are different then the list contains duplicate values.
   - Otherwise, there is no duplicate values in the list.

8. **Scenario:** A digital calculator includes a feature to sum the digits of a number for verification purposes.

   Write logic to calculate the sum of all digits in a given integer.

   Answer: Follow the below steps:
   - Get the number from the user using **input ()** function.
   - Initialize the total as 0.
   - Using **for loop** fetch each number and save it in temporary variable.
   - Then sum the total and the temporary variable.
   - Finally, the display the answer using **print functio**