1. **Scenario:** A system checks if a user is eligible to vote based on their age.

   Write logic to ask the user for their age and determine if they are eligible to vote based on whether they are 18 or older.

- Get the user input for age
- Using if condition to check the condition age >= 18
- If condition satisfies that is they're 18 or older, eligible to vote. In else, not eligible to vote.

2. **Scenario:** A program processes a list of numbers and needs to find the largest value.

   Write logic to identify and return the largest number from a given list.

- First, we create a new variable named largest_value and initialize it with 0.
- Use for loop to loop through the list.
- Use if condition to check if the item in the list is greater than the value stored in largest_value variable. If yes, then largest_value variable is initialized again with the item value from the list and the loop goes on.

3. **Scenario:** A company provides employees with a 10% bonus if their salary exceeds $50,000.

   Write logic to determine the bonus amount based on the given salary.

- Get the input for employee salary and store it in a variable called "employee_salary"
- Use if condition to check whether the salary is greater than $50,000 or not. If yes, calculate 10% bonus and add it to their salary. Else, no bonus added.

4. **Scenario:** A program evaluates a number to determine if it is even or odd.

   Write logic to check whether a given number is even or odd.

- Get user input for a number and store it in a variable
- Use if condition to check whether the number is divisible by 2 or not.
- If it is divisible, then it is a even number. Else, it is a odd number

5. **Scenario:** A text-processing tool reverses a given word or sentence for formatting purposes.

   Write logic to take a word or sentence as input and produce its reversed version.

- Use Python slicing to reverse a string.

- In slicing, use -1 to read it in reverse. [: : -1]
- Then print the string

6. **Scenario:** A grading system determines whether a student has passed or failed based on their score.

   Write logic to check if a student has passed a subject by scoring at least 40 marks.

- Get the score from the student and store it in a variable.
- Use if condition to check whether the score is greater than or equal to 40.
- If yes, he passed. Else, he failed.

7. **Scenario:** A retail store offers a 20% discount if a customer's total order exceeds $100. Write logic to calculate the final amount to be paid after applying the discount.
   - Get the total cost of customer order and store it in a variable.
   - Use if condition to check whether it is greater than $100 or not.
   - If yes, calculate 20% from the total and minus that value from the total order.
   - Else, no discount applicable.
8. **Scenario:** A banking system processes withdrawal requests and ensures the user has enough balance.

   Write logic to check if a user has enough balance before allowing a withdrawal and update the remaining balance accordingly.

- Ask user input for amount of withdrawal and store it in a variable.
- Use if condition to check with enough balance. Whether the amount of withdrawal is lesser than the balance.
- If yes, withdrawal request processed and minus the withdrawal amount from the balance to update it.
- Else, withdrawal request not allowed.

9. **Scenario:** A calendar system verifies whether a given year is a leap year based on standard leap year rules.

   Write logic to determine whether a given year is a leap year.

- Get a year from the user as input and store it in a variable.
- Use if condition to check whether the year is divisible by 4 but it is not divisible by 100. unless it is also divisible by 400.
- If yes, leap year, else, not a leap year.

10. **Scenario:** A program filters out only even numbers from a given list.

Write logic to extract and return only the even numbers from a list.

- Use for loop to loop through the list.
- Inside for loop, use if condition to check each item whether it is divisible by 2 or not.
- If yes, print the number because it is not even.