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.

Ans:

1.Input the age of the user
2. Check if the age is >18 or below.
3. If age > 18 → print "Eligible to Vote"
4.Else → print "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.

Ans:

1.Input the list of numbers
2. Get the length of the list
3. Assign index 0 to a variable say a
4. Put a for loop for the length of the list
5. if a > index 1 value retain a , else assign index 1 to the variable a

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.

Ans:

1.Input the salary of Employees
2. if salary of employee > $50,000 ; salary = salary + (salary * 0.1)
3. else salary = salary

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.

Ans:

1.Input the number
2. if number % 2 == 0 ; print → Given no is Even
3. else → print → Given no is Odd

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.

Ans :

1. Input the word or sentence
2. Convert the string to list
3. reverse the list and store in the same list
4. convert the list back to 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.

Ans:

1.Input the marks of the student
2. If mark >= 40 → print "Student Pass"
3. else → print "Student 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

Ans:

1. Input final bill amount of customer
2. if final bill >$100 --> new bill = final bill – (final bill * 0.2)
3. else new bill = final bill

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.

Ans :

1. Input the withdrawal amount of user
2 Check if total amount – withdrawal < minimum balance → then process request
3. Else Print "Minimum balance not available" and cancel request

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.

Ans:

1. Enter the year
2. if year % 4 == 0 , print "Leap year"
3. else print "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.

Ans:

1. Input list of numbers

2. put a for loop for the length of the list
3. Check if list element is divisible by 2 , then return answer in new list
4. else go to next list element