

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

- 1. Ask the user to enter their age.
- 2. Check if the age is 18 or older.
- 3. If yes, print "Eligible to vote."
- 4. Otherwise, print "Not eligible to vote."
- 2. Scenario: A program processes a list of numbers and needs to find the largest value. Logic:
  - 1. Read the list of numbers.
  - 2. Assume the first number is the largest.
  - 3. Iterate through the list, comparing each number with the current largest value.
  - 4. If a larger number is found, update the largest value.
  - 5. Return the largest number.
- 3. Scenario: A company provides employees with a 10% bonus if their salary exceeds \$50,000.

# Logic:

- 1. Read the employee's salary.
- 2. If the salary is greater than \$50,000, calculate a 10% bonus.
- 3. Otherwise, set the bonus to zero.
- 4. Return the calculated bonus amount.
- 4. Scenario: A program evaluates a number to determine if it is even or odd. Logic:
  - 1. Read the input number.
  - 2. Check if the number is divisible by 2.
  - 3. If yes, print "Even."
  - 4. Otherwise, print "Odd."
  - 5. **Scenario:** A text-processing tool reverses a given word or sentence for formatting purposes.

Logic:



- 1. Read the input word or sentence.
- 2. Convert the input into a list of characters.
- Reverse the order of characters.
- 4. Join the reversed characters into a string.
- 5. Return the reversed word or sentence.
- 6. Scenario: A grading system determines whether a student has passed or failed based on their score.

## Logic:

- 1. Read the student's marks.
- 2. If the marks are 40 or above, print "Pass."
- 3. Otherwise, print "Fail."
- 7. Scenario: A retail store offers a 20% discount if a customer's total order exceeds \$100.

## Logic:

- 1. Read the total order amount.
- 2. If the amount is more than \$100, calculate a 20% discount.
- 3. Subtract the discount from the total amount.
- 4. Return the final amount to be paid.
- 8. Scenario: A banking system processes withdrawal requests and ensures the user has enough balance.

### Logic:

- 1. Read the account balance and withdrawal amount.
- 2. If the withdrawal amount is less than or equal to the balance, process the withdrawal.
- 3. Subtract the withdrawal amount from the balance and return the updated balance.
- If the withdrawal amount exceeds the balance, print "Insufficient funds."
- 9. Scenario: A calendar system verifies whether a given year is a leap year based on standard leap year rules.

### Logic:

1. Read the input year.



- 2. If the year is division by 100, it is a loap your.
- 3. If the year is divisible by 100 but not by 400, it is not a leap year.
- 4. If the year is divisible by 4 but not by 100, it is a leap year.
- 5. Otherwise, it is not a leap year.

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

- 1. Read the list of numbers.
- 2. Create an empty list to store even numbers.
- 3. Iterate through the list and check if each number is divisible by 2.
- 4. If divisible, add the number to the new list.
- 5. Return the list of even numbers.