### **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.



Step1: Ask the user to enter the age

Step2: check if age >18 then the user is eligible to vote

Step3: else the user is inelgible to vote

### **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.

Step1: get list of numbers

Step 2: mark the first number as largest

Step 3: compare the first number with the rest of numbers

Step 4: If the larger number is found, mark it as largest

Step 5: return the largest number

### **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.

Step 1: Get the Salary of employee

Step 2: if the salary exceeds $50000, mark he is elegible for 10 % bonus.

Step 3: evaluate the bonus value, 10 % of their salary

Step 4: else there is no bonus for the employee

Step 5: return bonus

### **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.

Step 1: Get the number

Step 2: if the number is divisible by 2, its a even number

Step 3: else the number is odd

Step 4: return even or odd number

### **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.

Step 1: Get the input of word or sentence

Step 2: convert the word into list of characters

Step 3: reverse the list of characters

Step 4: convert the characters into word or sentence

Step 5: return the reversed word

### **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.

Step 1: Get the marks from the students

Step 2: if the mark is greater than equal to 40, the student has passed

Step 3: Else the student is failed

Step 4: Return result whether student passed or failed



1. **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.

Step 1: Get the total order value of the customer

Step 2: if order exceeds $100, then customer is elegible for 20% discount

Step 3: else the customer is not elegible

Step 4: evaluate the discount amount for the bill & subtract it from the original order value

Step 5: return the new bill values

### **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.

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Step 1: Get the amount to be withdrawn by the user

Step 2: if the withdrawal amount is less the balance, the user is allowed to take money

Step 3: else insufficient balance

Step 4: return user balance elegible or inelegible

### **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.

Step 1: Get the year input from the user

Step 2: if the year is divisible by 4 it is leap year

Step 3: else the year is not leap

Step 4: return leap year not leap year

### **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.

Step 1: Read the list of numbers

Step 2: create a new list to store new numbers

Step 3: iterate through the list, if the number is divisible by 2, move the number to new list

Step 4: return the new list of even numbers

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