

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:

Get the age from user by using input

Write the logic to check whether the user age is eligible for vote

Logic: if age is greater than or equal to 18, print function show (eligible)

Otherwise else print function show (not eligible)

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:

Create the list which contain the value (mix of both small and large values)

Write the logic to check the value against 0 by using for loop

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:

Write/get the salary input from user

Write the logic by using if conditon – if salary $\geq \$50,000$, add 10 % bonus

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:

Create a variable, assign the values(numbers) to variable

Using for loop, if and divisible by 0 to find out the odd and even

If divisible by 0, print function will show (number is even)

else, print function will show (number 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:

Get the input from the user

Assign the input to the variable

Connect the variable with. Reverse

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:

write/get the list of student marks

add all marks and assign to the variable(total)

write the logic to check by using if, and else to categorize the grading system, if mark ≥ 40 , print (pass), else print (fail)

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:

Write or get the price of product

Add all price of the product and assign to the variable

Write the logic by using to evaluate if total price exceed more than 100 apply 20 % discount by using arithmetic operation

Ex:

Totalorder = 200

Discount = Totalorder*20/100

Print(Discount)

- 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:

Allow user to enter the pin number and get the account details during the time of card insert

Allow the software to show the respective balance to the respective user before proceed withdrawal once their pin entered

Before proceed withdrawal, showing available balance shows helps user know the withdrawal limit

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:

Write or get the year from user

Check the given year is divisible by 4, and given year is not divisible by 100

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:

Write the list contain values

Write logic using if and for loop to check the number present in list divide by zero,