

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 age from the user as input
- If the age  $\geq 18$  then print ELIGIBLE
- Else print 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.

- Create a list with different numbers
- Initialize the first number as BIG
- Create a FOR loop to check if the subsequent item in the list is largest
- If yes, assign BIG with that item
- Continue the loop until the last item of the list
- Finally return BIG

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 salary of the employee as input
- Check if the salary  $> \$50,000$
- If yes, then give 10% bonus by using the formula  $BONUS = SALARY * 0.1$
- Else print No 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.

- Get the input from user
- Check if the number when divided by 2, doesn't have a remainder
- If yes, print even number
- Else print 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.

- Get the input string from the user
- Use `str[::-1]` to reverse the string :P

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 marks for all the subject using different variables
- Using if condition, check if all the marks are >40
- If yes, print PASSED
- Else print 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 order amount
- Using if condition, check if the amount is >\$100
- If yes, apply 20% discount and deduct the discount amount from the total amount and return the discounted total
- Else no 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.

- Get the withdrawal amount from the user
- Subtract the withdrawal amount from the current bank balance and save it as new balance
- If new balance is >min\_balance, then allow for withdrawal
- Else print "You will not have min\_balance after this withdrawal"

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 the input year from the user
- When you divide the year by 4, if you have remainder =0 then 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.

- Declare and initiate the list with different numbers
- Create a for loop to iterate through the list
- Check if the number is divisible by 2
- If yes, return those numbers