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.

   Step:

```
age = int(input("Enter your age: "))
if age >= 18:
    print("You are eligible to vote.")
else:
    print("You are 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.

   Step:

```
numbers = [10, 25, 89, 3, 56]
largest = max(numbers)
print("The largest number is:", largest)
```

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.

   Step:

```
salary = float(input("Enter your salary: "))
if salary > 50000:
    bonus = salary * 0.10
else:
    bonus = 0
print("Bonus amount is:", 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.

   Step:

```
num = int(input("Enter a number: "))
if num % 2 == 0:
    print("The number is even.")
else:
    print("The 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.

   Step:

```
text = input("Enter a word or sentence: ")
reversed_text = text[::-1]
print("Reversed text:", reversed_text)
```

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.

   Step:

```
score = int(input("Enter student score: "))
if score >= 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.

Step:

```
total = float(input("Enter total order amount: "))
if total > 100:
    discount = total * 0.20
else:
    discount = 0
final_amount = total - discount
print("Final amount to pay:", final_amount)
```

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.

Step:

```
balance = float (input ("Enter your balance: "))
withdraw = float (input ("Enter amount to withdraw: "))
if withdraw <= balance:
    balance -= withdraw
    print("Withdrawal successful. Remaining balance:", balance)
else:

    print ("Insufficient balance.")
```

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.

Step:

```
year = int (input ("Enter a year: "))
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print ("Leap year")
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.

Step:

```
numbers = [ ]
even_numbers = [num for num in numbers if num % 2 == 0]
print("Even numbers:", even_numbers)
```