**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:**

1.Read age🡺int(input())

2.If age < 18 🡺 print(“Not Eligible”)

3.Else🡺print(“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:**

1.Get the list of num

2.Initialize the maxi=0

3.Loop through the list

4.check the num > maxi

5.if true 🡺reassign maxi=num

**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:**

1.Get the salart🡺int(input())

2.If the sal>50000🡺print(sal\*0.1)

**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:**

1.Get the num

2.if num%2==0🡺print(“Even”)

3.else🡺print(“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**:

**1**.Get the word or sentence🡺s=input()

**2**.print(s[::-1]

**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:**

1.Get the mark🡺int(input())

2.if mark>40 🡺 print(“Pass”)

3.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:**

1.Get the bill

2.if bill>100🡺bill\_amount=bill-(bill\*0.25)

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.

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**ANS:**

1.Get the amount

2.if the amount>balance🡺print(“Not enough balance”)

3.else🡺bal-=amount

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:**

1.Get the year

2.if (yr%4==0 and yr%100!=0) or yr%400==0 🡺 print(leap yr)

3.else🡺”Not leap yr”

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:

1.Get list and initialize empty list🡺res=[]

2.loop through loop , if ele%2==0🡺res.append(ele)