### **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.

**Logic:**

Step1: Get the input from the user using ‘input’.

Step2: Check the user Age is equal to or greater than ‘18’ using ‘if’ statement.

Step3: If the user Age is equal to or greater than ‘18’ print user is ‘Eligible to Vote’

Step4: Then write ‘else’ for who is not able to satisfy the above condition directly move to else part and print user is ‘Not Eligible 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.

**Logic:**

Step1: Assign the variable as ‘0’(i=0)

Step2: Give the list in ForLoop like (for j in list)

Step3: Check the first value to ‘I’ using if statement like (if i<j)

Step4: If condition satisfied it will store the ‘j’ value to ‘I'

Step5: It will check every value in the and store the largest value in ‘I’ finally print the ‘I’ in end.

### **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.

**Logic:**

Step1: Check the employee salary is greater than $50,000 using ‘if statement

Step2: If condition satisfied the employee will get 10% bonus from their salary

Step3: Bonus amount = Employee salary \*0.10.

### **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.

**Logic:**

Step1: Get the number from user input

Step2: Check the given number is divisible by 2==0 using ‘if’ Statement

Step3: If condition satisfied then print the given number is “even”

Step4: If condition is not satisfied go to ‘else’ part

Step5: In ‘else’ part print the number is “odd”

### **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.

**Logic:**

Step1: Get the input from the user.

Step2: Here we use Slicing [::-1] to reverse the string.

Step3: Print the reversed string.

### **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.

**Logic:**

Step1: Get the Student mark

Step2: Check whether the student scored at least 40 Marks in the subject using ‘if’ Statement.

Step3: If condition satisfied print “Pass”

Step4: If condition failed move on to else part and print “Fail”.

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.

**Logic:**

Step1: Get Customer total order amount.

Step2: If the customer order amount exceeds $100 give the 20% discount from, they purchased amount (discount=purchased amount \* 0.20)

Step3: Then calculate the final amount (final amount= purchased amount – discount)

Step4: Print the final amount.

Step5: if condition not satisfied go to else part and print “No discount”

### **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.

**Ramishahope Artificial Intelligence Pvt Ltd**

**36, Old Anandas, SG Arcade, Marudhamalai Main Road, Vadavalli, Coimbatore -641041.**

**+91 6385383227 |** [**www.hopelearning.net**](http://www.hopelearning.net/) **|** [**mdaravind@hopelearning.net**](mailto:mdaravind@hopelearning.net) **| 33AAMCR3722R1ZU**

**Logic:**

Step1: Check the current account balance.

Step2: Get the input from the user to withdraw the amount.

Step3: Check the current account balance is lesser than or equal to withdraw amount

Using if statement.

Step4: if condition satisfied calculate remaining balance after withdraw amount (remaining balance=current account balance- withdraw)

Step5: Print withdraws successful.

Step6: If condition not satisfied the move onto else part and print “Insufficient balance”.

### **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.

**Logic:**

Step1: Get the year from the user.

Step2: Check the year is satisfied the if condition, (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0)

Step3: if Condition true print “the year is leap year”.

Step4: If condition not satisfied the go to else part and print the year is 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.

### **Logic:**

**Ramishahope Artificial Intelligence Pvt Ltd**

**36, Old Anandas, SG Arcade, Marudhamalai Main Road, Vadavalli, Coimbatore -641041.**

**+91 6385383227 |** [**www.hopelearning.net**](http://www.hopelearning.net/) **|** [**mdaravind@hopelearning.net**](mailto:mdaravind@hopelearning.net) **| 33AAMCR3722R1ZU**

**Ramishahope Artificial Intelligence Pvt Ltd**

**36, Old Anandas, SG Arcade, Marudhamalai Main Road, Vadavalli, Coimbatore -641041.**

**+91 6385383227 |** [**www.hopelearning.net**](http://www.hopelearning.net/) **|** [**mdaravind@hopelearning.net**](mailto:mdaravind@hopelearning.net) **| 33AAMCR3722R1ZU**

Step1: Get the list.

Step2: using forloop (for value in list).

Step3: Check the value using if statement the given number is divisible by 2 and equal to 0.

Step4: The value which are satisfied the condition will move onto if part and print the value.