

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.

**Logic:**

1. Ask user to enter their age.
2. Check if entered age is 18 or older.
3. If yes print “Eligible to Vote”
4. Otherwise print “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.

**Logic:**

1. Read the numbers in list and assume largest value.
2. Compare the list with assumed largest value.
3. If find largest number then assumed largest value.
4. print largest number. Return largest number.
5. Otherwise, print assumed number as largest value. Return largest value.

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.

**Logic:**

1. Read the employees' salaries.
2. Check if their salary exceeds \$50,000.
3. If yes calculate and add 10% bonus to salary.
4. Otherwise, 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.

**Logic:**

1. Read the given number
2. Check if the number is divisible by 2.
3. If yes print “Even”
4. Otherwise, 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.
- Logic:**
1. Read the given word or sentence.
  2. Read the word in reverse.
  3. Print word 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.
- Logic:**
1. Read the marks
  2. Check if the marks 40 or above.
  3. If yes print “pass”
  4. Otherwise, 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.
- Logic:**
1. Read the customer's total order.
  2. Check if exceed \$100.
  3. If yes calculate 20% discount
  4. Subtract discount from total amount.
  5. Return the final amount to be paid.
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.
- Logic:**
1. Read the account balance and withdrawal amount

2. Check if withdrawal amount is less than or equal to the balance.  
Process the withdrawal.
  3. subtract withdrawal amount from the balance and return the updated balance.
  4. Otherwise return insufficient funds.
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.

**Logic:**

1. Read the given year.
2. Check if the year is divisible by 400.
3. If yes, print “Leap Year”.
4. If not, check the year is divisible by 100.
5. If not, print “Leap Year”
6. If yes, check the year is divisible by 4.
7. If yes, print “Leap Year”.
8. Otherwise, print “Not 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.

**Logic:**

1. Read the list of numbers.
2. Create an empty list to store even numbers.
3. Iterate through the list and check each number is divisible by 2.
4. If divisible, add the number to the new list.
5. Return the list of even numbers.