### **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 user input for Age
* Check if input age is greater than or equal to 18
* If yes, print Eligible
* If no, print Not Eligible

### **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 of numbers
* Assign the first number to variable holding largest number
* Use the for loop and check if the number is greater than next.
* If Greater, assign is to the variable
* After loop ends, print the variable.

### **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 salary as input from user
* Check if salary > 50000
* If yes, return salary/10 as bonus
* If no, return no bonus

### **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 a number as input
* If the number%2 is zero, print even
* If it is 1, print 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.

* Get a word / sentence as input
* Method 1 – use slicing – [::-1]
* Method 2 – built in reversed function, then join – “”.join(reverse(str))
* Method 3 – using loop – char + variable

### **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 user input for subject score
* If score>=40, print pass
* If <40, 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.

* Get user input on bill
* Check if bill>100
* If yes, calculate 20% of bill, subtract from bill to find total
* Print total

### **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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* Get withdrawal request amount
* Check account balance
* If balance>withdrawal, allow request
* Update balance-withdrawal in account

### **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 year as input
* Check whether the year is divisible by 4 and not divisible by 100, but can be divisible by 400
* If yes, print leap year
* If no, print not a 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.

* Get or write a list of numbers
* If you get list as input, convert as int.
* Using loop, check each number using %2
* If even, print the number

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