### **Scenario:** A system checks if a user is eligible to vote based on their age.

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### **Ask age from user**

* + - 1. **Compare age with 18 (if age < 18) if its true not eligible**
      2. **If the above condition is false the user is 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.

* + - 1. **To know which no is greater we should compare each**
      2. **So, compare all numbers in list by using for loop**
      3. **first assume index first is largest, then compare**
      4. **Update if needed**

### **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.

* + - 1. **Employee who earn >or = 50,000 , eligible for 10% bonus**
      2. **So, we should ask salary from user**
      3. **Then compare current salary to 50,000(salary<=50,000)**
      4. **If it is true add 10% as a bonus or not**

### **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.

* + - 1. **Find the given number is odd or even**
      2. **Using modules, we can find the given number is divisible by 2 or not**
      3. **If the given number if divisible by 2 without remainder it’s even**

### **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.

* + - 1. **To show a reversed version of word or string**
      2. **We can reverse the word or sentence by [start,stop,step]**
      3. **So, we start with [::-1]**
      4. **-1 denotes step its mean start with last character**

### **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.

* + - 1. **So we need to compare the mark with least mark 40**
      2. **Using if condition**
      3. **Condition is true print pass**
      4. **If false student is fail**

### **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.

* + - 1. **We can complete this problem with compare total order with price**
      2. **If price over 100 we sub 20% in total price**

### **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.

* + - 1. **We should compare withdrawal amount with customer’s current balance**
      2. **If account balance is more than withdrawal , proceed to withdrawal**

### **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.

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* + - 1. **Find the rules of leap year (the given year should divisible by 4, not divisible by 100 and divisible by 400)**
      2. **The given year should pass all of this given condition above**

### **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

* + - 1. **Create function to get even numbers**
      2. **Create dummy list to extract even numbers**
      3. **And the list should pass the modulus condition**

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