**MINI PROJECT**

**GROUP MEMBERS NAMES** :-

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TOPIC:- we build a website to convert various converstion possible of different subjects and field The program includes multiple options to convert different units in categories such as mass, temperature, length, time, gallons to liters, and currency conversions. Each category has a menu-driven interface, enabling users to choose the type of conversion and input values.

STRUCTURE OF THE CODE

The program is structured with a main menu, where the user selects an option, and depending on the choice, the program calls a specific function to handle that conversion. The conversion functions are organized into separate methods, each handling a specific type of unit conversion.

The main structure of the program follows a typical do-while loop for user interaction, which continues running until the user chooses to exit the program. The main menu offers several categories of conversions, and each category has its own submenu that allows further choices.

* **Main Menu**:
  + Mass Conversion
  + Temperature Conversion
  + Length Conversion
  + Time Conversion
  + Gallons to Liters Conversion
  + Currency Conversion
  + Exit Option

Each of these options calls a separate function to handle the specific conversions related to the selected category.

**Detailed Analysis of Each Functionality**

1. **Mass Conversion**:
   * The mass conversion options allow conversion between kilograms, grams, milligrams, pounds, and ounces.
   * The conversion formulas used in the program are accurate and based on standard unit conversion rates.
   * A user inputs a value, then selects the mass unit they want to convert to, and the program calculates and displays the converted values.
2. **Temperature Conversion**:
   * This function includes conversions between Celsius, Fahrenheit, and Kelvin.
   * The program asks for the temperature value and the desired conversion type, then applies the corresponding formulas.
   * Example formulas:
     + Celsius to Fahrenheit: F = (C \* 9 / 5) + 32
     + Celsius to Kelvin: K = C + 273.15
     + And similar formulas for other conversions.
3. **Length Conversion**:
   * The length conversion options cover various units like meters, kilometers, centimeters, millimeters, inches, and feet.
   * The program asks the user to input the value they want to convert and then selects from the units listed.
   * It handles common length unit conversions and applies the correct multiplication or division factors for each conversion type.
4. **Time Conversion**:
   * The time conversion menu allows the user to convert between hours, minutes, seconds, and days.
   * For example, converting hours to minutes involves multiplying the value by 60, and converting seconds to minutes involves dividing by 60.
   * This function works well for small units of time and handles conversions accurately.
5. **Gallons to Liters and Liters to Gallons**:
   * This function specifically handles conversions between gallons and liters. The conversion rate used is:
     + 1 Gallon = 3.78541 Liters
     + 1 Liter = 1 / 3.78541 Gallons
   * The user can convert in both directions, and the results are displayed based on the user's input.
6. **Currency Conversion**:
   * The currency conversion feature allows users to convert USD to different currencies: EUR (Euros), GBP (British Pounds), INR (Indian Rupees), and AUD (Australian Dollars).
   * Conversion rates are hard-coded into the program, such as:
     + 1 USD = 0.92 EUR
     + 1 USD = 0.81 GBP
     + 1 USD = 83.1 INR
     + 1 USD = 1.49 AUD
   * The program asks for the amount in USD and converts it to the selected currency using the provided exchange rates.