***Task - Build a Data Cleansing and Transformation Script***

***Objective:***

*Create a python script to clean and transform a dataset, preparing it for analysis or loading into a database. This task will help you practice data manipulation and ensure you understand key data cleaning operation.*

***Dataset:***

*A CSV file named customer\_data.csv with the following columns:*

* *CustomerID: Unique identifier for each customer.*
* *Name: Full name of the customer.*
* *Email: Customer’s email address.*
* *DateOfBirth: Customer's data of birth (in various formats).*
* *RegistrationDate: Date when the customer registered (with some missing values).*
* *Country: Customer’s country (with inconsistent case and whitespace).*
* *MonthlySpend: Customer’s monthly spend (with some invalid or missing values).*

***Tasks to Perform:***

1. *Read the csv file.*
2. *Data Cleansing:*
   1. *Handling missing values:*
      1. *Fill or remove rows with RegistrationDate.*
      2. *Identify and handle missing invalid MonthlySpend values.*
   2. *Standardize data formats:*
      1. *Convert DateOfBirth to a standard YYYY-MM-DD format.*
   3. *Clean text data:*
      1. *Standardize the Country field to have consistent capitalization (e.g., “United States” instead of "united states”).*
   4. *Remove duplicate records based on CustomerID (if any).*
3. *Data Transformation:*
   1. *Calculate a new column “Age” from DateOfBirth.*
   2. *Normalize the MonthlySpend column to a standard scale if needed.*
4. *Output the cleaned data:*
   1. *Save the cleaned and transformed data into a new CSV file named “cleaned\_customer\_data.csv”.*