EXPERIMENT NO: 3(C)

Pandas library -Create your own dataset in CSV format

Aim:

To create and save a CSV file containing game score details using the **Pandas** library in Python.

Algorithm:

1. Start the program.
2. Import the pandas, random, and datetime libraries.
3. Define lists for player names, games, levels, and countries.
4. Generate sample data for 25 game score records using random values.
5. Create a dictionary where keys represent column names (Player_ID, Player_Name, Game, etc.) and values represent data lists.
6. Convert the dictionary into a Pandas DataFrame using pd.DataFrame().
7. Save the DataFrame to a CSV file using the to_csv() method with the filename game_scores.csv.
8. Display a message confirming the successful creation of the CSV file.
9. End the program.

Program:

[1]:
```
import pandas as pd
import random
from datetime import datetime, timedelta
```

[2]:
```
players = ['Alice', 'Bob', 'Charlie', 'David', 'Evelyn', 'Frank', 'Grace', 'Hannah', 'Ian', 'Julia',
           'Kevin', 'Laura', 'Mike', 'Nina', 'Oscar', 'Priya', 'Quinn', 'Ravi', 'Sophia', 'Tom',
           'Uma', 'Victor', 'Wendy', 'Xavier', 'Yara', 'Zane']
games = ['Valorant', 'Fortnite', 'PUBG', 'Apex Legends', 'COD Mobile']
levels = ['Easy', 'Medium', 'Hard']
countries = ['USA', 'UK', 'India', 'Germany', 'France', 'Canada', 'Japan']
```

[3]:
```
data = {
    'Player_ID': [f'P{1000 + i}' for i in range(25)],
    'Player_Name': random.choices(players, k=25),
    'Game': random.choices(games, k=25),
    'Score': [random.randint(100, 1000) for _ in range(25)],
    'Date': [(datetime(2025, 1, 1) + timedelta(days=random.randint(0, 300))).strftime('%Y-%m-%d') for _ in range(25)],
    'Level': random.choices(levels, k=25),
    'Time_Taken': [round(random.uniform(5.0, 60.0), 2) for _ in range(25)],
    'Country': random.choices(countries, k=25)
}
```

[4]:
```
df = pd.DataFrame(data)
```

[5]:
```
df.to_csv('game_scores.csv', index=False)
```

[6]:
```
print("CSV file 'game_scores.csv' created successfully!")
```

```
CSV file 'game_scores.csv' created successfully!
```

Result:

The Python code to perform the CSV file creation operation is successfully executed, and the file **game_scores.csv** is generated containing 25 game score records