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===== Personal Fitness Tracker =====
1. Load Data
2. Preview Data
3. Handle Missing Data (Median)
4. Data Analysis (NumPy & Pandas)
5. Log New Activity
6. Calculate Metrics
7. Filter by Activity Type
8. Bar Chart: Time per Activity
9. Line Chart: Calories Over Time
10. Pie Chart: Activity Distribution
11. Heatmap: Duration vs Calories
12. Generate Report
0. Exit
Enter your choice: 1
Data-set Loaded from: data/fitness_data.csv
Shape: (1000, 4)
Columns: ['date', 'activity type', 'duration', 'calories burned']
```

```
Enter your choice: 2
      date activity type  duration  calories burned
0  2023-05-25          Yoga       62.0        245.6
1  2023-02-11           NaN       33.0        285.0
2  2023-11-21        Dancing      34.0        249.2
3  2024-10-13      Swimming      35.0        439.5
4  2023-09-23       Walking      49.0        211.5
```

```
Handling Missing Data...
```

```
Missing values before:
date            34
activity type   28
duration        30
calories burned 38
dtype: int64
```

```
Missing values after:
date            34
activity type   28
duration        0
calories burned 0
dtype: int64
Missing data handled using MEDIAN values
```

```
Enter your choice: 4
```

```
===== DATA ANALYSIS (NumPy & Pandas) =====
Average Daily Calories Burned: 724.04
```

```
Total Time Spent Per Activity:
```

```
activity type
```

```
Basketball      5885.0
Cycling         6339.0
Dancing          4259.0
HIIT            2216.0
Running          4523.0
Swimming         3893.0
Tennis           5377.0
Walking          3766.0
Weight Training  5389.0
Yoga             5774.0
Name: duration, dtype: float64
```

```
Weekly Calories Burned Trend:
```

```
date
```

```
2022-12-26/2023-01-01    692.6
2023-01-02/2023-01-08    4549.2
2023-01-09/2023-01-15    1960.3
2023-01-16/2023-01-22    2855.1
2023-01-23/2023-01-29    2046.1
...
2024-11-25/2024-12-01    3320.6
2024-12-02/2024-12-08    5354.1
2024-12-09/2024-12-15    3480.9
2024-12-16/2024-12-22    1812.1
2024-12-23/2024-12-29    5622.8
Freq: W-SUN, Name: calories burned, Length: 105, dtype: float64
```

```
Enter your choice: 5
```

```
Activity Type: Jumping
```

```
Duration (minutes): 120
```

```
Calories Burned: 1000
```

```
New activity logged successfully
```

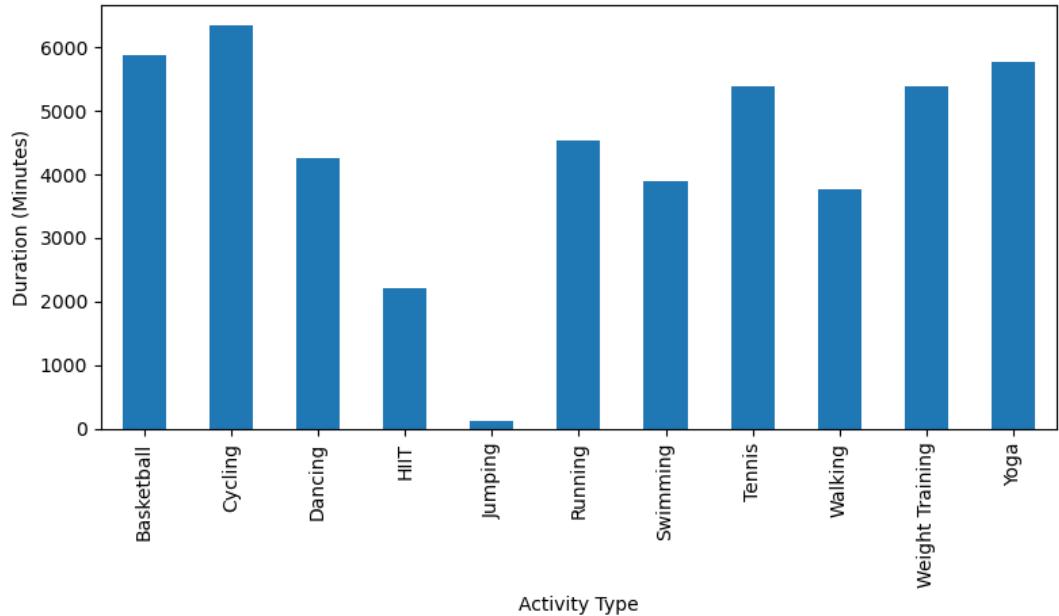
```
Enter your choice: 6
Total Calories Burned: 403658.80000000005
Average Duration: 48.862137862137864
Activity Frequency:
activity type
Running      111
Weight Training 104
Cycling       103
Basketball     102
Walking        98
Swimming       97
Yoga          96
Dancing        95
Tennis         91
HIIT           75
Jumping        1
Name: count, dtype: int64
```

```
Enter your choice: 7
Enter activity type: Running
      date activity type  duration  calories burned
 6  2023-08-27 00:00:00      Running    27.0      255.6
 8  2024-07-20 00:00:00      Running    48.0      406.1
23  2023-07-23 00:00:00      Running    52.0      515.3
26  2023-03-21 00:00:00      Running    23.0      230.8
28  2024-04-27 00:00:00      Running    22.0      186.3
...
970 2023-12-11 00:00:00      Running    34.0      341.1
971 2024-03-13 00:00:00      Running    28.0      411.9
988 2023-02-18 00:00:00      Running    44.0      530.6
989 2024-01-16 00:00:00      Running    27.0      263.1
996 2023-04-02 00:00:00      Running    53.0      474.0
```

```
[111 rows x 4 columns]
```

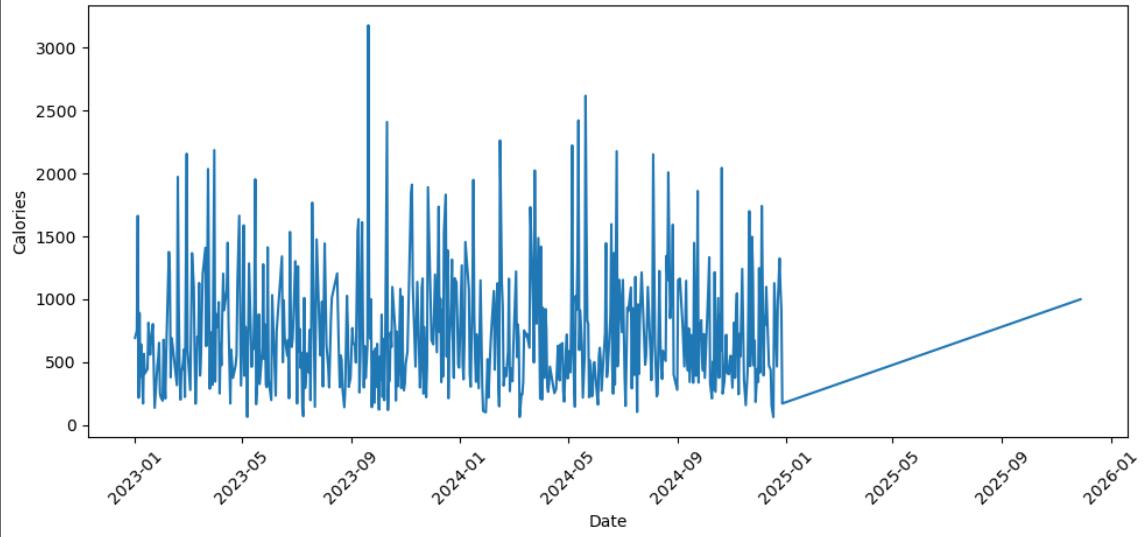
Enter your choice: 8

Time Spent on Each Activity



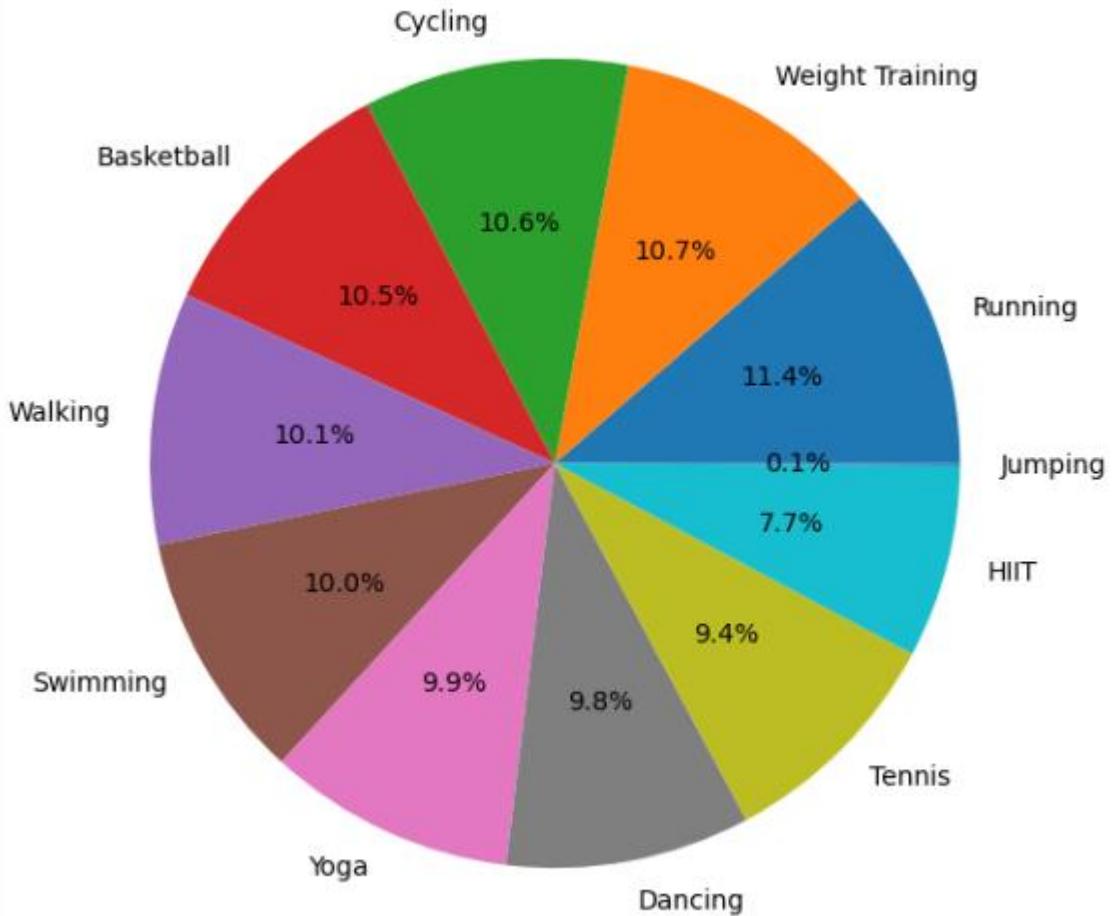
Enter your choice: 9

Calories Burned Over Time

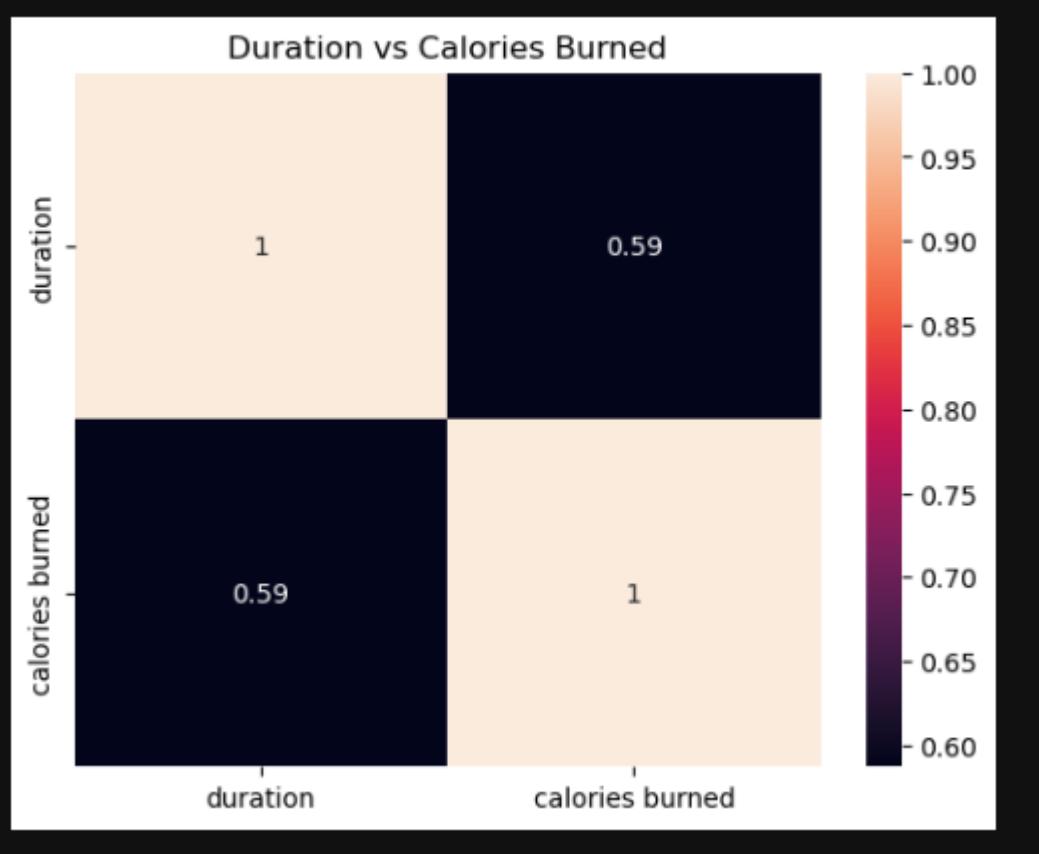


Enter your choice: 10

Activity Distribution



```
Enter your choice: 11
```



```
Enter your choice: 12
```

```
===== FITNESS SUMMARY REPORT =====
Total Activities: 1000
Total Calories Burned: 388393.6
Average Duration: 48.85
Most Frequent Activity:
activity type
Running    111
Name: count, dtype: int64
```

```
Enter your choice: 0
Exiting the program.....
```