

INPUT CODE

```
1  import csv
2  import datetime
3  import os
4
5  FILE = 'expenses.csv'
6  HEADER = ['Date', 'Amount', 'Category', 'Description']
7
8  # --- Helper Functions ---
9
10 def init_file():
11     """Initializes CSV file with header if it doesn't exist."""
12     if not os.path.exists(FILE):
13         with open(FILE, 'w', newline='') as f:
14             csv.writer(f).writerow(HEADER)
15         print(f"Created new expense file: {FILE}")
16
17 def get_data():
18     """Reads all data rows from the CSV file."""
19     try:
20         with open(FILE, 'r', newline='') as f:
21             # reader converts each line into a list of strings
22             return list(csv.reader(f))[1:] # [1:] skips the header
23     except FileNotFoundError:
24         print(f"Error: File '{FILE}' not found.")
25     return []
26
27 # --- Main Application ---
28
29 def main():
30     init_file()
31
32     while True:
33         print("\n1. Expense Tracker\n2. View\n3. Summary\n4. Exit")
34         choice = input("Enter choice: ")
35
36         if choice == '1':
37             try:
38                 amount = float(input("Amount ($): "))
39                 category = input("Category: ")
40                 description = input("Description: ")
41                 date = datetime.datetime.now().strftime('%Y-%m-%d')
42
43                 new_row = [date, amount, category, description]
44
45                 with open(FILE, 'a', newline='') as f:
46                     csv.writer(f).writerow(new_row)
47                 print("Expense added.")
48
49             except ValueError:
50                 print("Invalid amount. Please enter a number.")
51
52         elif choice == '2':
53             data = get_data()
54             if not data:
55                 print("No expenses recorded.")
56                 continue
57
58             print("\n--- All Expenses ---")
59             for row in data:
60                 print(f"Date: {row[0]}, Amount: ${float(row[1]):.2f}, Category: {row[2]}, Desc: {row[3]}")
```

```
55     |     |     print("No expenses recorded.")
56     |     |     continue
57
58     |     print("\n--- All Expenses ---")
59     |     for row in data:
60     |         |     print(f"Date: {row[0]}, Amount: ${float(row[1]):.2f}, Category: {row[2]}, Desc: {row[3]}")
61
62     |     elif choice == '3':
63     |         data = get_data()
64     |         if not data:
65     |             |     print("No expenses recorded for summary.")
66     |             |     continue
67
68     |         summary = {}
69     |         for _, amount_str, category, _ in data:
70     |             try:
71     |                 |             amount = float(amount_str)
72     |                 |             summary[category] = summary.get(category, 0) + amount
73     |             except ValueError:
74     |                 |             continue # Skip invalid entries
75
76     |         print("\n--- Category Summary ---")
77     |         for cat, total in summary.items():
78     |             |             print(f"{cat}: ${total:.2f}")
79
80     |     elif choice == '4':
81     |         print("Goodbye! 🌟")
82     |         break
83
84     |     else:
85     |         |     print("Invalid choice.")
86
87     |     if __name__ == "__main__":
88     |         main()
```

OUTPUTCODE

```
Invalid choice.

👉 Expense Tracker
1. Add
2. View
3. Summary
4. Exit
Enter choice: 1
Amount ($): 547
Category: petrol
Description: going sehore to bhopal
Expense added.

👉 Expense Tracker
1. Add
2. View
3. Summary
4. Exit
Enter choice: 1
Amount ($): 6900
Category: shopping
Description: buy cloth and phone for my friend
Expense added.

👉 Expense Tracker
1. Add
2. View
3. Summary
4. Exit
Enter choice: 1
Amount ($): 7666
Category: travel expanses
Description: buy something and rent
Expense added.

👉 Expense Tracker
1. Add
2. View
3. Summary
4. Exit
Enter choice: 2

--- All Expenses ---
Date: 2025-11-23, Amount: $547.00, Category: petrol, Desc: going sehore to bhopal
Date: 2025-11-23, Amount: $6900.00, Category: shopping, Desc: buy cloth and phone for my friend
Date: 2025-11-23, Amount: $7666.00, Category: travel expanses, Desc: buy something and rent
```