

```

1  import csv
2  import os
3
4
5  def view_expenses(expenses):
6      """Function to display all expenses."""
7      if not expenses:
8          print("No expenses recorded.")
9      else:
10         for expense in expenses:
11             print(
12                 f>Date: {expense['date']}, Category: {expense['category']}, Amount:
13                 {expense['amount']}, Description: {expense['description']}")
14
15  def add_expense(expenses):
16      """Function to add a new expense record."""
17      date = input("Enter the date (YYYY-MM-DD): ")
18      category = input("Enter the category (e.g., Food, Travel): ")
19
20      try:
21          amount = float(input("Enter the amount: "))
22      except ValueError:
23          print("Invalid amount. Please enter a numeric value.")
24          return
25
26      description = input("Enter a brief description: ")
27      expenses.append({
28          "date": date,
29          "category": category,
30          "amount": amount,
31          "description": description
32      })
33      print("Expense added successfully.")
34
35
36  def set_budget():
37      """Function to set a monthly budget and save it to a file."""
38      try:
39          budget = float(input("Enter your monthly budget: "))
40          with open('budget.txt', 'w') as file:
41              file.write(str(budget))
42          print("Budget saved successfully.")
43          return budget
44      except ValueError:
45          print("Invalid input. Please enter a numeric value.")
46          return set_budget()
47
48
49  def load_budget():
50      """Function to load the budget from a file."""
51      if os.path.exists('budget.txt'):
52          with open('budget.txt', 'r') as file:
53              try:
54                  return float(file.read().strip())
55              except ValueError:
56                  print("Invalid budget data. Resetting budget.")
57                  return 0.0
58      return 0.0
59
60
61  def track_budget(expenses, budget):
62      """Function to track expenses and alert if budget is exceeded."""
63      total_expenses = sum(expense['amount'] for expense in expenses)
64      print(f"Total expenses: {total_expenses:.2f}")
65
66      if total_expenses > budget:
67          print("⚠ Warning: You have exceeded your budget!")
68      else:
69          print(f"You are within your budget. You have {budget - total_expenses:.2f}
70              remaining.")

```

```

71
72 def save_expenses(expenses, filename='expenses.csv'):
73     """Function to save expenses to a file."""
74     with open(filename, 'w', newline='') as file:
75         writer = csv.writer(file)
76         writer.writerow(["Date", "Category", "Amount", "Description"])
77         for expense in expenses:
78             writer.writerow([expense['date'], expense['category'],
79                             expense['amount'], expense['description']])
79     print("Expenses saved successfully.")
80
81
82 def load_expenses(filename='expenses.csv'):
83     """Function to load expenses from a file."""
84     expenses = []
85     try:
86         with open(filename, 'r', newline='') as file:
87             reader = csv.DictReader(file)
88             for row in reader:
89                 if all(key in row for key in ['Date', 'Category', 'Amount',
90                                             'Description']):
91                     try:
92                         row['amount'] = float(row['Amount'])
93                         expenses.append({
94                             'date': row['Date'],
95                             'category': row['Category'],
96                             'amount': row['amount'],
97                             'description': row['Description']
98                         })
99                     except ValueError:
100                         print(f"Skipping invalid expense amount: {row}")
101                 else:
102                     print(f"Skipping invalid expense record: {row}")
103     except FileNotFoundError:
104         print("No existing expenses found. Starting fresh.")
105     return expenses
106
107 def main():
108     expenses = load_expenses()
109     budget = load_budget()
110
111     while True:
112         print("\n Personal Expense Tracker")
113         print("1. Add Expense")
114         print("2. View Expenses")
115         print("3. Track Budget")
116         print("4. Set Budget")
117         print("5. Save Expenses")
118         print("6. Exit")
119         choice = input("Enter your choice: ")
120
121         if choice == '1':
122             add_expense(expenses)
123         elif choice == '2':
124             view_expenses(expenses)
125         elif choice == '3':
126             track_budget(expenses, budget)
127         elif choice == '4':
128             budget = set_budget()
129         elif choice == '5':
130             save_expenses(expenses)
131         elif choice == '6':
132             save_expenses(expenses)
133             print("Exiting... Goodbye!")
134             break
135         else:
136             print("Invalid choice, please select a valid option.")
137
138
139 if __name__ == "__main__":
140     main()

```