

Personal Finance Tracker:

```
import json
import os
import csv

# Define the file to store data
DATA_FILE = 'finance_data.json'
CSV_FILE = 'finance_data.csv'

def load_data():
    if os.path.exists(DATA_FILE):
        with open(DATA_FILE, 'r') as file:
            return json.load(file)
    else:
        return {"income": [], "expenses": []}

def save_data(data):
    with open(DATA_FILE, 'w') as file:
        json.dump(data, file, indent=4)

def add_entry(entry_type, amount, description):
    data = load_data()
    entry = {"amount": amount, "description": description}
    if entry_type == "income":
        data["income"].append(entry)
    elif entry_type == "expense":
        data["expenses"].append(entry)
    else:
        print("Invalid entry type. Use 'income' or 'expense'.")
    return
```

```
save_data(data)

print(f"{entry_type.capitalize()} entry added.")
```

```
def view_summary():

    data = load_data()

    total_income = sum(item["amount"] for item in data["income"])

    total_expenses = sum(item["amount"] for item in data["expenses"])

    balance = total_income - total_expenses

    print("\nFinancial Summary:")

    print(f"Total Income: ${total_income:.2f}")

    print(f"Total Expenses: ${total_expenses:.2f}")

    print(f"Balance: ${balance:.2f}\n")
```

```
def generate_csv():

    data = load_data()

    with open(CSV_FILE, 'w', newline='') as file:

        writer = csv.writer(file)

        writer.writerow(["Type", "Amount", "Description"])

        for entry in data["income"]:

            writer.writerow(["Income", entry["amount"], entry["description"]])

        for entry in data["expenses"]:

            writer.writerow(["Expense", entry["amount"], entry["description"]])

    print(f"CSV file '{CSV_FILE}' has been generated.")
```

```
def main():

    while True:

        print("Personal Finance Tracker")

        print("1. Add Income")

        print("2. Add Expense")

        print("3. View Summary")

        print("4. Generate CSV")
```

```
print("5. Exit")

choice = input("Choose an option: ")

if choice == "1":
    while True:
        amount = float(input("Enter income amount: "))
        description = input("Enter description: ")
        add_entry("income", amount, description)
        another = input("Add another income entry? (y/n): ").lower()
        if another != 'y':
            break
elif choice == "2":
    while True:
        amount = float(input("Enter expense amount: "))
        description = input("Enter description: ")
        add_entry("expense", amount, description)
        another = input("Add another expense entry? (y/n): ").lower()
        if another != 'y':
            break
elif choice == "3":
    view_summary()
elif choice == "4":
    generate_csv()
elif choice == "5":
    print("Exiting...")
    break
else:
    print("Invalid choice. Please select a valid option.")

if __name__ == "__main__":
    main()
```

