```
o
                                              Run
                                                        Shell
                                                                                                     Clear
main.py
 1
                                                      Personal Budget Tracker
    import json
                                                      1. Record Transaction
 2
                                                      2. Calculate Budget
 3
                                                      Expense Analysis
                                                      4. Exit
    transactions = []
                                                      Enter your choice: 1
 5
                                                      Enter transaction type (Income/Expense): income
    def record_transaction():
                                                      Enter category: salary
                                                      Enter amount: 3000
 8
        transaction_type = input("Enter transaction
            type (Income/Expense): ").lower()
                                                      Enter date (YYYY-MM-DD): 2023-10-01
        category = input("Enter category: ")
 9
                                                      Personal Budget Tracker
        amount = float(input("Enter amount: "))
10
                                                      1. Record Transaction
11
        date = input("Enter date (YYYY-MM-DD): ")
                                                      Calculate Budget
12
                                                      Expense Analysis
13
        transaction = {
                                                      4. Exit
14
            "type": transaction_type,
                                                      Enter your choice: 1
            "category": category,
15
                                                      Enter transaction type (Income/Expense): expense
            "amount": amount,
                                                      Enter category: groceries
17
            "date": date,
                                                      Enter amount: 200
                                                      Enter date (YYYY-MM-DD): 2023-10-03
18
19
                                                      Personal Budget Tracker
20
        transactions.append(transaction)

    Record Transaction

21
        save_transactions()
                                                      Calculate Budget
                                                      Expense Analysis
22
23
                                                      4. Exit
24 -
                                                      Enter your choice: 2
    def calculate_budget():
25
        income = sum(transaction["amount"] for
                                                      Income: 3000.0
            transaction in transactions if
                                                      Expenses: 200.0
            transaction["type"] == "income")
                                                      Remaining Budget: 2800.0
                                                      Personal Budget Tracker
26
        expenses = sum(transaction["amount"] for
            transaction in transactions if
                                                      1. Record Transaction
            transaction["type"] == "expense")
                                                      Calculate Budget
27
        remaining_budget = income - expenses
                                                      Expense Analysis
28
                                                      Exit
        print(f"Income: {income}")
                                                      Enter your choice: 3
29
                                                      Expense Analysis:
30
        print(f"Expenses: {expenses}")
        print(f"Remaining Budget:
                                                      groceries: 200.0
31
            {remaining_budget}")
                                                      Personal Budget Tracker
32
                                                      1. Record Transaction
33
                                                      2. Calculate Budget
                                                      Expense Analysis
34
    def expense_analysis():
35
        expense_categories = {}
                                                      4. Exit
36
        for transaction in transactions:
                                                      Enter your choice:
37
            if transaction["type"] == "expense":
                category = transaction["category"]
38
                amount = transaction["amount"]
39
40
                if category in expense_categories:
41
                    expense_categories[category] +=
                        amount
42
43
                    expense_categories[category] =
44
45
        print("Expense Analysis:")
46
        for category, amount in expense_categories
            .items():
47
            print(f"{category}: {amount}")
48
49
50 def save_transactions():
51 -
        with open("transactions.json", "w") as file
            json.dump(transactions, file)
53
55 - try:
56 -
        with open("transactions.json", "r") as file
57
            transactions = json.load(file)
58
    except FileNotFoundError:
59
        transactions = []
60
```

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```
main.py
                                      o.
                                              Run
                                                        Shell
                                                                                                      Clear
                                                       Personal Budget Tracker
16
            "amount": amount,
                                                       1. Record Transaction
17
            "date": date,
18
                                                       Calculate Budget
        }
                                                       3. Expense Analysis
19
                                                       4. Exit
20
        transactions.append(transaction)
                                                       Enter your choice: 1
21
        save_transactions()
                                                       Enter transaction type (Income/Expense): income
22
                                                       Enter category: salary
23
                                                       Enter amount: 3000
24
    def calculate_budget():
                                                       Enter date (YYYY-MM-DD): 2023-10-01
25
        income = sum(transaction["amount"] for
                                                       Personal Budget Tracker
            transaction in transactions if
                                                       1. Record Transaction
            transaction["type"] == "income")
                                                       2. Calculate Budget
26
        expenses = sum(transaction["amount"] for
                                                       Expense Analysis
            transaction in transactions if
                                                       4. Exit
            transaction["type"] == "expense")
                                                       Enter your choice: 1
27
        remaining_budget = income - expenses
                                                       Enter transaction type (Income/Expense): expense
28
                                                       Enter category: groceries
29
        print(f"Income: {income}")
                                                       Enter amount: 200
30
        print(f"Expenses: {expenses}")
                                                       Enter date (YYYY-MM-DD): 2023-10-03
31
        print(f"Remaining Budget:
                                                       Personal Budget Tracker
            {remaining_budget}")
                                                       1. Record Transaction
32
                                                       2. Calculate Budget
33
                                                       Expense Analysis
34
    def expense_analysis():
                                                       4. Exit
35
        expense_categories = {}
                                                       Enter your choice: 2
36
        for transaction in transactions:
                                                       Income: 3000.0
37
            if transaction["type"] == "expense":
                                                       Expenses: 200.0
38
                category = transaction["category"]
                                                       Remaining Budget: 2800.0
39
                amount = transaction["amount"]
                                                       Personal Budget Tracker
40
                if category in expense_categories:
                                                       1. Record Transaction
41
                    expense_categories[category] +=
                                                       2. Calculate Budget
                                                       3. Expense Analysis
42
                                                       4. Exit
43
                    expense_categories[category] =
                                                       Enter your choice: 3
                         amount
                                                       Expense Analysis:
44
                                                       groceries: 200.0
45
        print("Expense Analysis:")
                                                       Personal Budget Tracker
        for category, amount in expense_categories
46
                                                       1. Record Transaction
            .items():
                                                       2. Calculate Budget
47
            print(f"{category}: {amount}")
                                                       3. Expense Analysis
48
                                                       4. Exit
49
    def save_transactions():
                                                       Enter your choice:
50
51
        with open("transactions.json", "w") as file
52
            json.dump(transactions, file)
53
54
55
    try:
56
        with open("transactions.json", "r") as file
            transactions = json.load(file)
57
    except FileNotFoundError:
58
59
        transactions = []
60
61
62 while True:
63
        print("Personal Budget Tracker")
64
        print("1. Record Transaction")
        print("2. Calculate Budget")
65
66
        print("3. Expense Analysis")
67
        print("4. Exit")
68
69
        choice = input("Enter your choice: ")
70
71
        if choice == "1":
            record_transaction()
72
        elif choice == "2":
73
74
            calculate_budget()
75
        elif choice == "3":
            expense_analysis()
76
77
        elif choice == "4":
```

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JS