

```
# The Expense Trackwer App.....
```

```
# Function to add income
```

```
def add_income(amount):
```

```
    global total_income
```

```
    total_income += amount
```

```
    print(f"Income of ${amount} added successfully.")
```

```
# Function to add an expense
```

```
def add_expense(category, amount):
```

```
    global total_expenses, expenses
```

```
    total_expenses += amount
```

```
    expenses.append({"category": category, "amount": amount})
```

```
    print(f"Expense of ${amount} under '{category}' category added successfully.")
```

```
# Function to calculate remaining budget
```

```
def calculate_budget():
```

```
    return total_income - total_expenses
```

```
# Function to analyze expenses by category
```

```
def analyze_expenses():
```

```
    category_expenses = {}
```

```
    for expense in expenses:
```

```
        category = expense["category"]
```

```
        amount = expense["amount"]
```

```
        if category in category_expenses:
```

```
            category_expenses[category] += amount
```

```
        else:
```

```
            category_expenses[category] = amount
```

```

print("\nExpense Analysis:")

for category, amount in category_expenses.items():
    print(f'{category}: ${amount}')

# Main function
def main():
    while True:
        print("\n===== Budget Tracker Menu =====")
        print("1. Add Income")
        print("2. Add Expense")
        print("3. Calculate Remaining Budget")
        print("4. Analyze Expenses")
        print("5. Exit")

        choice = input("Enter your choice: ")

        if choice == "1":
            amount = float(input("Enter income amount: "))
            add_income(amount)

        elif choice == "2":
            category = input("Enter expense category: ")
            amount = float(input("Enter expense amount: "))
            add_expense(category, amount)

        elif choice == "3":
            remaining_budget = calculate_budget()
            print(f"\nRemaining Budget: ${remaining_budget}")

```

```
elif choice == "4":
```

```
    analyze_expenses()
```

```
elif choice == "5":
```

```
    print("Exiting program. Goodbye!")
```

```
    break
```

```
else:
```

```
    print("Invalid choice. Please try again.")
```

```
if __name__ == "__main__":
```

```
    total_income = 0
```

```
    total_expenses = 0
```

```
    expenses = []
```

```
    main()
```