Screenshots

Habit.py

```python
class Habit:
    def __init__(self, name, target):
        self.name = name
        self.target = target

    def __str__(self):
        return f"Habit: {self.name} - Goal: {self.target}"
```

Habit_tracker.py

```python
import datetime
import json
from habit import Habit

class HabitTracker:
    def __init__(self):
        self.habits = {}
        self.logs = {}

    def addHabit(self, habit):
        self.habits[habit.name] = habit
        if habit.name not in self.logs:
            self.logs[habit.name] = {}

    def logHabit(self, name, date, done):
        if name in self.logs:
            self.logs[name][date.isoformat()] = done

    def getStreak(self, name):
        today = datetime.date.today()
        streak = 0
        logs = self.logs.get(name, {})
        currentDay = today
        while logs.get(currentDay.isoformat(), False):
            streak += 1
            currentDay -= datetime.timedelta(days=1)
        return streak
```

```
def getCompletionPercent(self, name, numDays):
    today = datetime.date.today()
    logs = self.logs.get(name, {})
    done = 0
    for i in range(numDays):
        checkDay = today - datetime.timedelta(days=i)
        if logs.get(checkDay.isoformat(), False):
            done += 1
    if numDays > 0:
        return (done / numDays) * 100
    else:
        return 0

def saveToFile(self, filename):
    habitData = {}
    for name, habit in self.habits.items():
        habitData[name] = habit.target

    saveData = {"habits": habitData, "logs": self.logs}

    with open(filename, "w") as f:
        json.dump(saveData, f)

def loadFromFile(self, filename):
    try:
```

```
def loadFromFile(self, filename):
    try:
        with open(filename, "r") as f:
            data = json.load(f)

        for name, target in data["habits"].items():
            self.habits[name] = Habit(name, target)
        self.logs = data["logs"]
    except:
        pass
```

Main.py

```python
import datetime
from habit import Habit # type: ignore
from habit_tracker import HabitTracker # type: ignore

def main():
    tracker = HabitTracker()
    tracker.loadFromFile("habits.json")

    while True:
        print("\n=== Habit Tracker ===")
        print("1. Add New Habit")
        print("2. Log Today's Progress")
        print("3. Check Streaks")
        print("4. View Last Week Stats")
        print("5. Save & Exit")

        choice = input("\nWhat would you like to do? ")

        if choice == "1":
            habitName = input("Enter habit name: ")
            habitGoal = input("What's your goal? ")
            newHabit = Habit(habitName, habitGoal)
            tracker.addHabit(newHabit)
            print("Great! Habit added successfully.")

        elif choice == "2":
            habitName = input("Which habit? ")
```

```python
        habitName = input("Which habit? ")
        if habitName not in tracker.habits:
            print("Hmm, I don't see that habit. Maybe add it first?")
            continue

        didIt = input("Did you complete it today? (y/n): ")
        if didIt.lower() == "y":
            tracker.logHabit(habitName, datetime.date.today(), True)
            print("Awesome! Logged as done.")
        else:
            tracker.logHabit(habitName, datetime.date.today(), False)
            print("No worries, there's always tomorrow!")

    elif choice == "3":
        if len(tracker.habits) == 0:
            print("You haven't added any habits yet.")
        else:
            print("\nYour current streaks:")
            for habitName in tracker.habits:
                streak = tracker.getStreak(habitName)
                print(f"  {habitName}: {streak} days in a row")

    elif choice == "4":
        if len(tracker.habits) == 0:
            print("No habits to show stats for.")
        else:
```

```
            else:
                print("\nLast 7 days completion:")
                for habitName in tracker.habits:
                    pct = tracker.getCompletionPercent(habitName, 7)
                    print(f"  {habitName}: {pct:.1f}% completed")

        elif choice == "5":
            tracker.saveToFile("habits.json")
            print("All saved! See you next time.")
            break

        else:
            print("Sorry, that's not a valid option. Try again!")

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

Habit Planner full code.PY

```
import datetime
import json

class Habit:
    def __init__(self, name, target):
        self.name = name
        self.target = target

    def __str__(self):
        return f"Habit: {self.name} - Goal: {self.target}"

class HabitTracker:
    def __init__(self):
        self.habits = {}
        self.logs = {}

    def addHabit(self, habit):
        self.habits[habit.name] = habit
        if habit.name not in self.logs:
            self.logs[habit.name] = {}

    def logHabit(self, name, date, done):
        if name in self.logs:
            self.logs[name][date.isoformat()] = done

    def getStreak(self, name):
        today = datetime.date.today()
```

```
    streak = 0
    logs = self.logs.get(name, {})
    currentDay = today
    while logs.get(currentDay.isoformat(), False):
        streak += 1
        currentDay -= datetime.timedelta(days=1)
    return streak

def getCompletionPercent(self, name, numDays):
    today = datetime.date.today()
    logs = self.logs.get(name, {})
    done = 0
    for i in range(numDays):
        checkDay = today - datetime.timedelta(days=i)
        if logs.get(checkDay.isoformat(), False):
            done += 1
    if numDays > 0:
        return (done / numDays) * 100
    else:
        return 0

def saveToFile(self, filename):
    habitData = {}
    for name, habit in self.habits.items():
```

```
            habitData[name] = habit.target

        saveData = {"habits": habitData, "logs": self.logs}

        f = open(filename, "w")
        json.dump(saveData, f)
        f.close()

    def loadFromFile(self, filename):
        try:
            f = open(filename, "r")
            data = json.load(f)
            f.close()

            for name, target in data["habits"].items():
                self.habits[name] = Habit(name, target)
            self.logs = data["logs"]
        except:
            pass

def main():
    tracker = HabitTracker()
    tracker.loadFromFile("habits.json")

    while True:
```

```
print("\n=== Habit Tracker ===")
print("1. Add New Habit")
print("2. Log Today's Progress")
print("3. Check Streaks")
print("4. View Last Week Stats")
print("5. Save & Exit")

choice = input("\nWhat would you like to do? ")

if choice == "1":
    habitName = input("Enter habit name: ")
    habitGoal = input("What's your goal? ")
    newHabit = Habit(habitName, habitGoal)
    tracker.addHabit(newHabit)
    print("Great! Habit added successfully.")

elif choice == "2":
    habitName = input("Which habit? ")
    if habitName not in tracker.habits:
        print("Hmm, I don't see that habit. Maybe add it first?")
        continue

    didIt = input("Did you complete it today? (y/n): ")
    if didIt.lower() == "y":
        tracker.logHabit(habitName, datetime.date.today(), True)
```

```
        print("Awesome! Logged as done.")
    else:
        tracker.logHabit(habitName, datetime.date.today(), False)
        print("No worries, there's always tomorrow!")

elif choice == "3":
    if len(tracker.habits) == 0:
        print("You haven't added any habits yet.")
    else:
        print("\nYour current streaks:")
        for habitName in tracker.habits:
            streak = tracker.getStreak(habitName)
            print(f"  {habitName}: {streak} days in a row")

elif choice == "4":
    if len(tracker.habits) == 0:
        print("No habits to show stats for.")
    else:
        print("\nLast 7 days completion:")
        for habitName in tracker.habits:
            pct = tracker.getCompletionPercent(habitName, 7)
            print(f"  {habitName}: {pct:.1f}% completed")

elif choice == "5":
    tracker.saveToFile("habits.json")
    print("All saved! See you next time.")
```

```
        elif choice == "5":
            tracker.saveToFile("habits.json")
            print("All saved! See you next time.")
            break

        else:
            print("Sorry, that's not a valid option. Try again!")

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

Output:

```
PS C:\Users\Nitin Sharma> & "D:/PROGRAMING FILE/IDE/ANACONDA/python.exe" "d:/PROGRAMING FILE/Vityarthi project/Habit Planner full code .
py"

=== Habit Tracker ===
1. Add New Habit
2. Log Today's Progress
3. Check Streaks
4. View Last Week Stats
5. Save & Exit

What would you like to do? 1
Enter habit name: Studying
What's your goal? Score good marks in End term Exam
Great! Habit added successfully.
```

```
=== Habit Tracker ===
1. Add New Habit
2. Log Today's Progress
3. Check Streaks
4. View Last Week Stats
5. Save & Exit

What would you like to do? 2
Which habit? Studying
Did you complete it today? (y/n): y
Awesome! Logged as done.
```

```
=== Habit Tracker ===
1. Add New Habit
2. Log Today's Progress
3. Check Streaks
4. View Last Week Stats
5. Save & Exit

What would you like to do? 3

Your current streaks:
  Studying : 0 days in a row
  Studying: 1 days in a row
```

```
=== Habit Tracker ===
1. Add New Habit
2. Log Today's Progress
3. Check Streaks
4. View Last Week Stats
5. Save & Exit

What would you like to do? 4

Last 7 days completion:
  Studying : 0.0% completed
  Studying: 14.3% completed
```

```
=== Habit Tracker ===
1. Add New Habit
2. Log Today's Progress
3. Check Streaks
4. View Last Week Stats
5. Save & Exit

What would you like to do? 5
All saved! See you next time.
```