K. R. MANGALAM UNIVERSITY

Programming for Problem Solving Using Python

ASSIGNMENT 1

Assignment Title: Attendance Tracker

Student Name : Ishant

Roll No. : 2501940015

Program : MCA (AI & ML)

Semester : I

Session : 2025-26

Github :- https://github.com/Ishantaneja/Attandance_tracker

Faculty Name : Ms. Neha Kaushik

Date of Submission : 12/11/2025

Source Code

```python
# Name: Ishant

# Date: 12/11/2025

# Assignment: Attendance Tracker


import csv

from datetime import datetime

attendance = {}

def include_attendance():

    print("\n ----------Insert the Entry ----------")

    while True :

        students = input("Enter the name of the student :").strip()

        if students =="":

            print("Invalid name")

            continue

        elif students in attendance :

            print("Name is already recorded")

            continue


        time = input("Enter arrival time (HH:MM AM/PM) :").strip()

        if time.strip() == " ":

            print("INVALID Enter again")

            continue


        attendance[students]= time

        print(f"{students} Arrived at {time}")


        another = input("do you want to add another record of new student (y/n) :").strip().lower()
```

```python
        if another != "y":
            break


def record_attendance():
    if len(attendance) == 0:
        print("\n No records found ")
        return


    print("\n ========= ATTENDANCE  =========\n ")
    print("Student Name\t\t Arrival Time")
    print("------------------------------------------")


    for student, arrive in attendance.items():
        print(f"{student}\t\t{arrive}")


    print("------------------------------------------")
    print(f"Total Students Present: {len(attendance)}")


def file_csv():
    if len(attendance) == 0:
        print("\n No records present.")
        return


    filename = "attendance_log.csv"
    n = datetime.now().strftime("%d-%m-%Y %I:%M %p")


    with open(filename, "w", newline="") as file:
        writer = csv.writer(file)
        writer.writerow([" Attendance "])
```

```python
        writer.writerow([f"Generated on: {n}"])
        writer.writerow([])
        writer.writerow(["Student Name", "Arrival Time"])

        for student, time in attendance.items():
            writer.writerow([student, time])

        writer.writerow([])
        writer.writerow(["Total Students Present", len(attendance)])

    print(f"\n Attendance has been saved to '{filename}'")


def absent_student():
    if len(attendance) == 0:
        print("\nThe record is empty")
        return
    try:
        total = int(input("\n Enter total number of students in class: "))
        absent = total - len(attendance)
        print(f"Total Present: {len(attendance)}")
        print(f"Total Absent: {absent}")
    except:
        print("Invalid number. Try again.")


def menu_view():
    while True:
        print("========================")
        print("\n========= MENU =========")
        print("1. Insert Attendance")
```
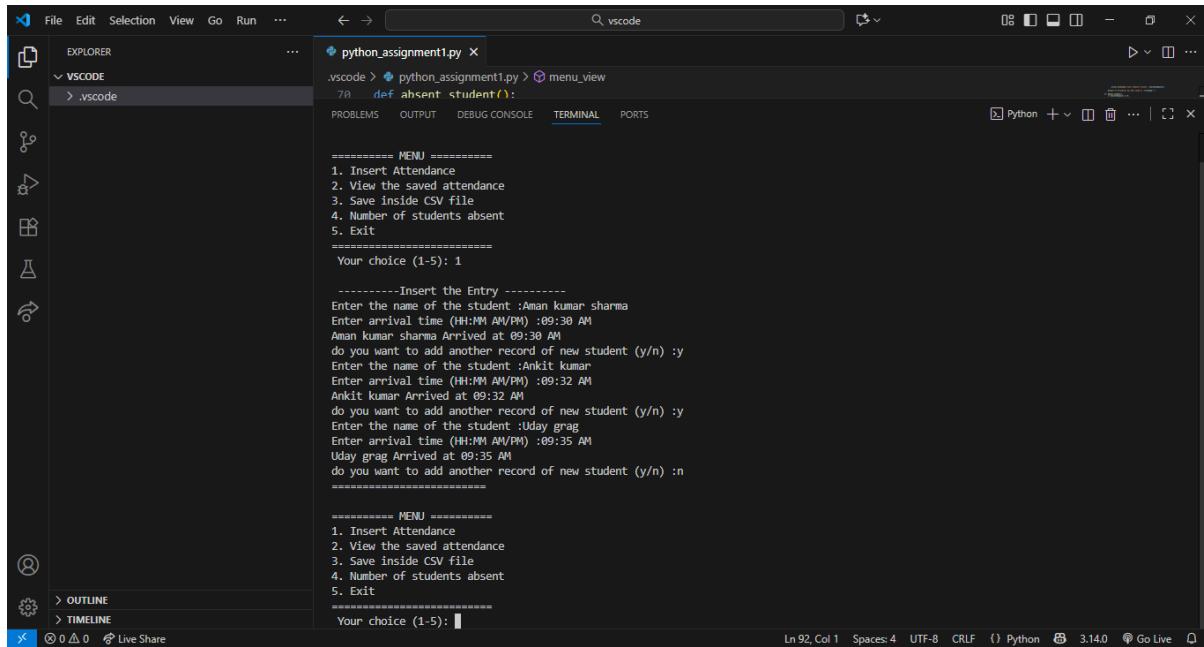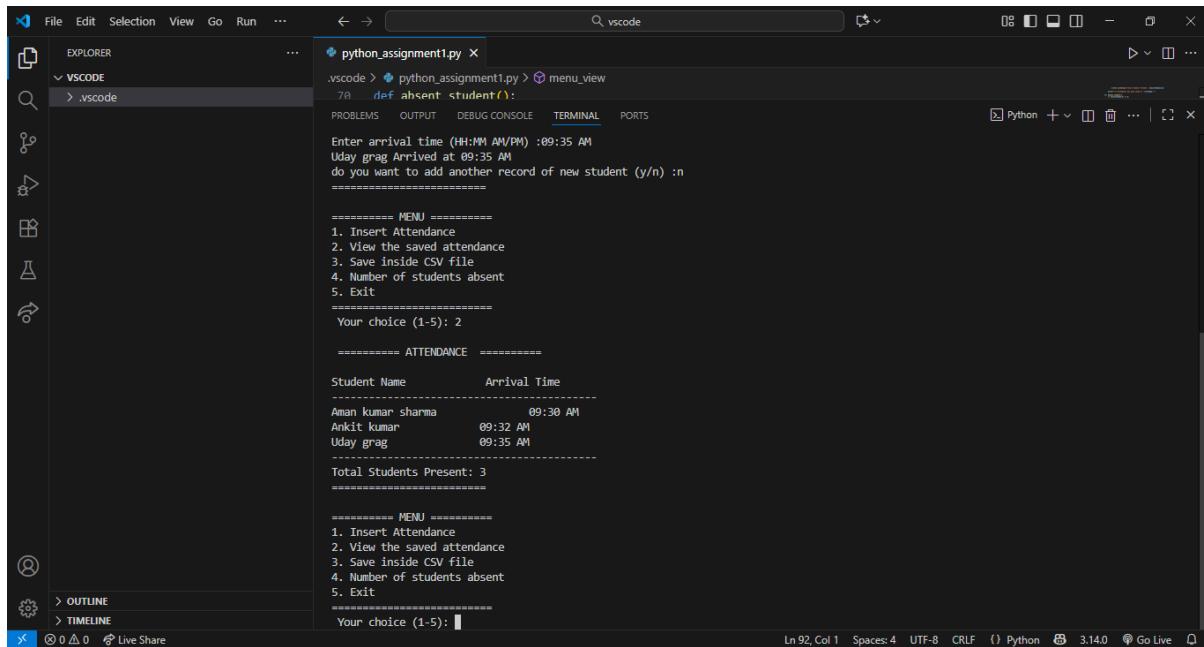
```python
        print("2. View the saved attendance")
        print("3. Save inside CSV file")
        print("4. Number of students absent")
        print("5. Exit")
        print("=========================")

        choice = input(" Your choice (1-5): ")
        if choice == "1":
            include_attendance()
        elif choice == "2":
            record_attendance()
        elif choice == "3":
            file_csv()
        elif choice == "4":
            absent_student()
        elif choice == "5":
            print("\nThank you for using Attendance Tracker")
            break
        else:
            print("Invalid choice. Try again.")
menu_view()
```

Output-1


```
========== MENU ==========
1. Insert Attendance
2. View the saved attendance
3. Save inside CSV file
4. Number of students absent
5. Exit
==========================
 Your choice (1-5): 1

 ----------Insert the Entry ----------
Enter the name of the student :Aman kumar sharma
Enter arrival time (HH:MM AM/PM) :09:30 AM
Aman kumar sharma Arrived at 09:30 AM
do you want to add another record of new student (y/n) :y
Enter the name of the student :Ankit kumar
Enter arrival time (HH:MM AM/PM) :09:32 AM
Ankit kumar Arrived at 09:32 AM
do you want to add another record of new student (y/n) :y
Enter the name of the student :Uday grag
Enter arrival time (HH:MM AM/PM) :09:35 AM
Uday grag Arrived at 09:35 AM
do you want to add another record of new student (y/n) :n
==========================

========== MENU ==========
1. Insert Attendance
2. View the saved attendance
3. Save inside CSV file
4. Number of students absent
5. Exit
==========================
 Your choice (1-5):
```

Output-2


```
Enter arrival time (HH:MM AM/PM) :09:35 AM
Uday grag Arrived at 09:35 AM
do you want to add another record of new student (y/n) :n
==========================

========== MENU ==========
1. Insert Attendance
2. View the saved attendance
3. Save inside CSV file
4. Number of students absent
5. Exit
==========================
 Your choice (1-5): 2

 ========== ATTENDANCE  ==========

Student Name              Arrival Time
-----------------------------------------
Aman kumar sharma              09:30 AM
Ankit kumar              09:32 AM
Uday grag              09:35 AM
-----------------------------------------
Total Students Present: 3
==========================

========== MENU ==========
1. Insert Attendance
2. View the saved attendance
3. Save inside CSV file
4. Number of students absent
5. Exit
==========================
 Your choice (1-5):
```

Output-3