Karthick VM
Batch – CIS 1.3

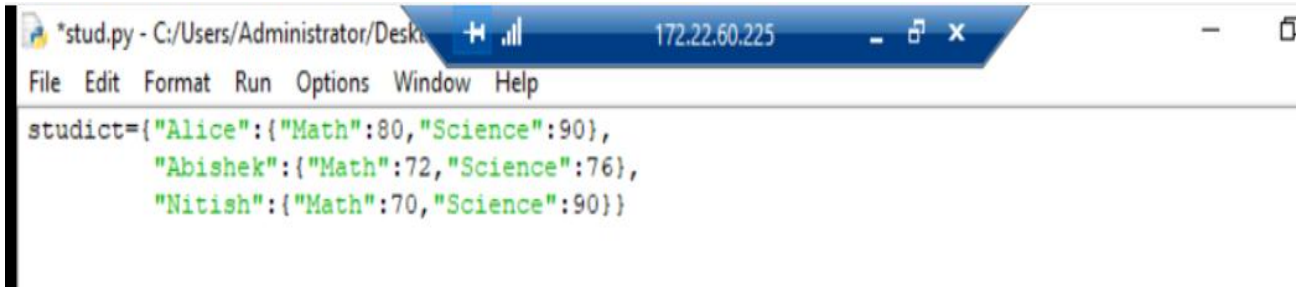
Weekly Python Assessment

Question1:

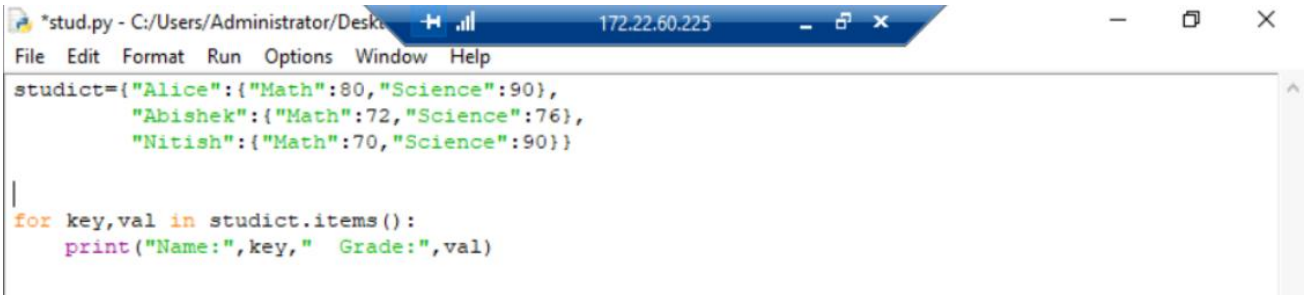
Student Grades and Courses Your school's administration wants to keep track of student grades across different courses.

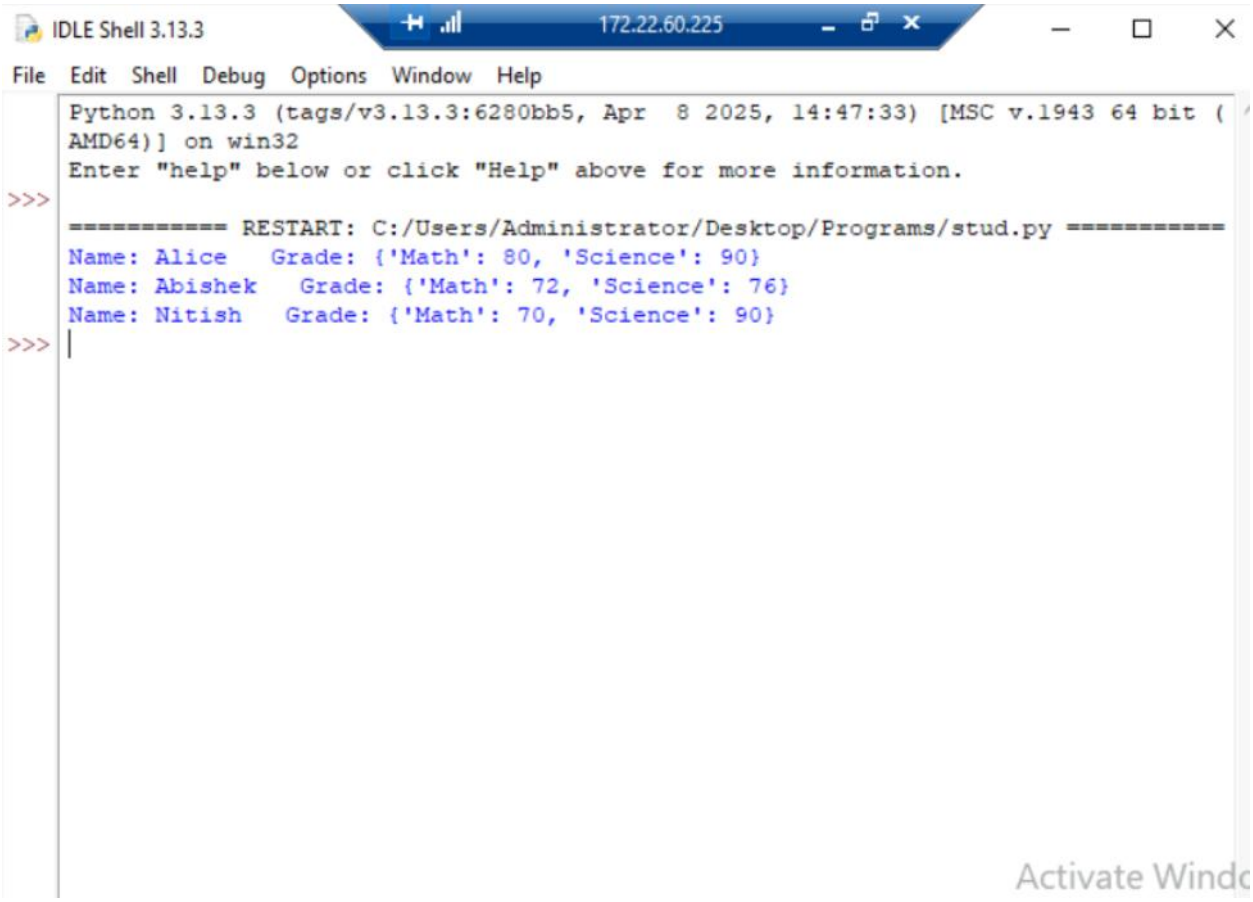
Tasks:

1. Create a dictionary called students where keys are student names (e.g., "Alice", "Bob") and values are dictionaries. Each inner dictionary should contain keys representing courses (e.g., "Math", "Science") and values representing their grades in those courses. Include at least three students and two courses per student.



2. Print the students dictionary.





3. Iterate through the students dictionary and print each student's name and their average grade across all courses.

```
for key,val in studict.items():
    print("Name: ",key)
    grade=sum(val.values())/2
    print("Average Grade: ",grade)
```

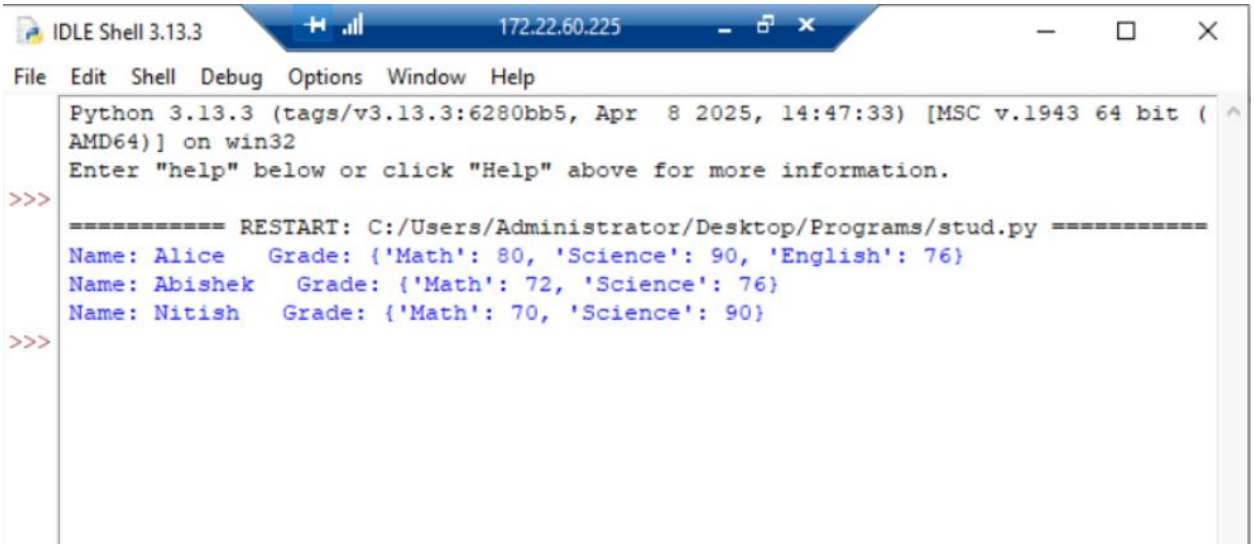
```
========== RESTART: C:/Users/Administrator/Desktop/Programs/stud.py ==========
Name: Alice   Grade: {'Math': 80, 'Science': 90}
Name: Abishek   Grade: {'Math': 72, 'Science': 76}
Name: Nitish   Grade: {'Math': 70, 'Science': 90}
Name:  Alice
Average Grade:  85.0
Name:  Abishek
Average Grade:  74.0
Name:  Nitish
Average Grade:  80.0
```

4. Add a new course and grade for one of the existing students.

print(students)

```
studict["Alice"]["English"]=76


for key,val in studict.items():
    print("Name:",key,"  Grade:",val)
```



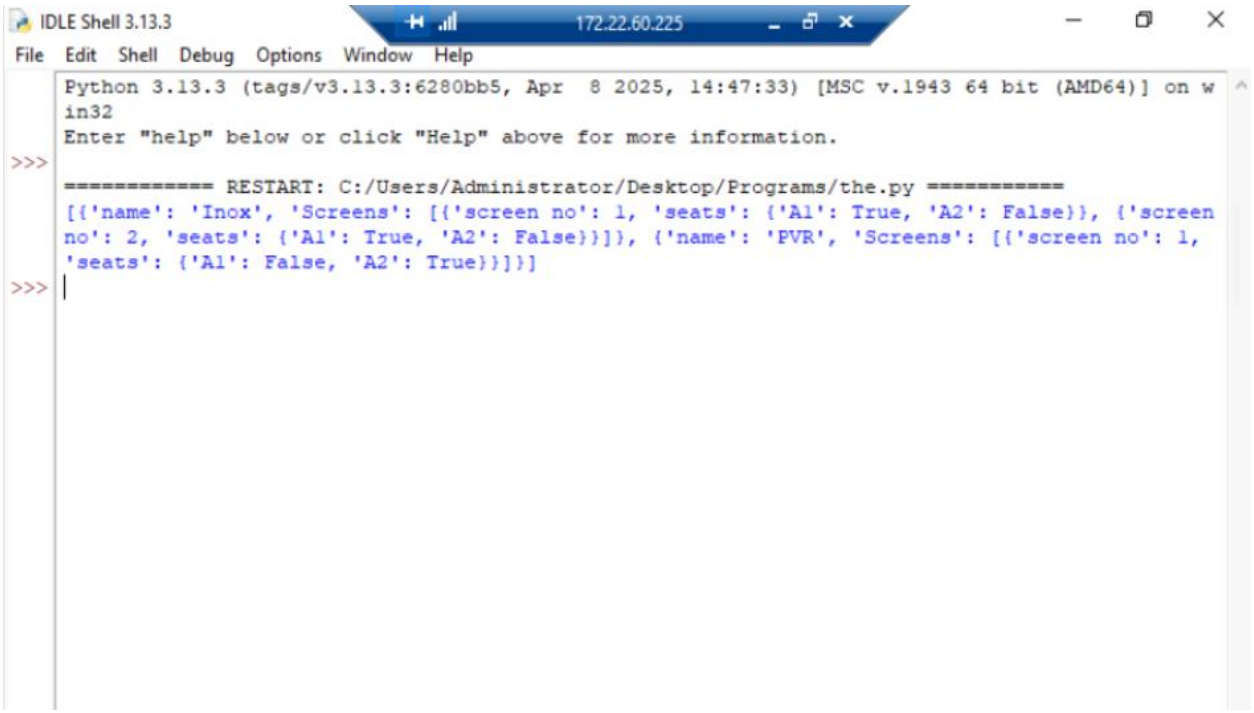
Question2:

Movie Ticket Booking

1. Data Setup
   - o Create a list called theaters. Each element is a dictionary with keys:
     - "name" (theater name)
     - "screens" (a nested list of screen dictionaries)

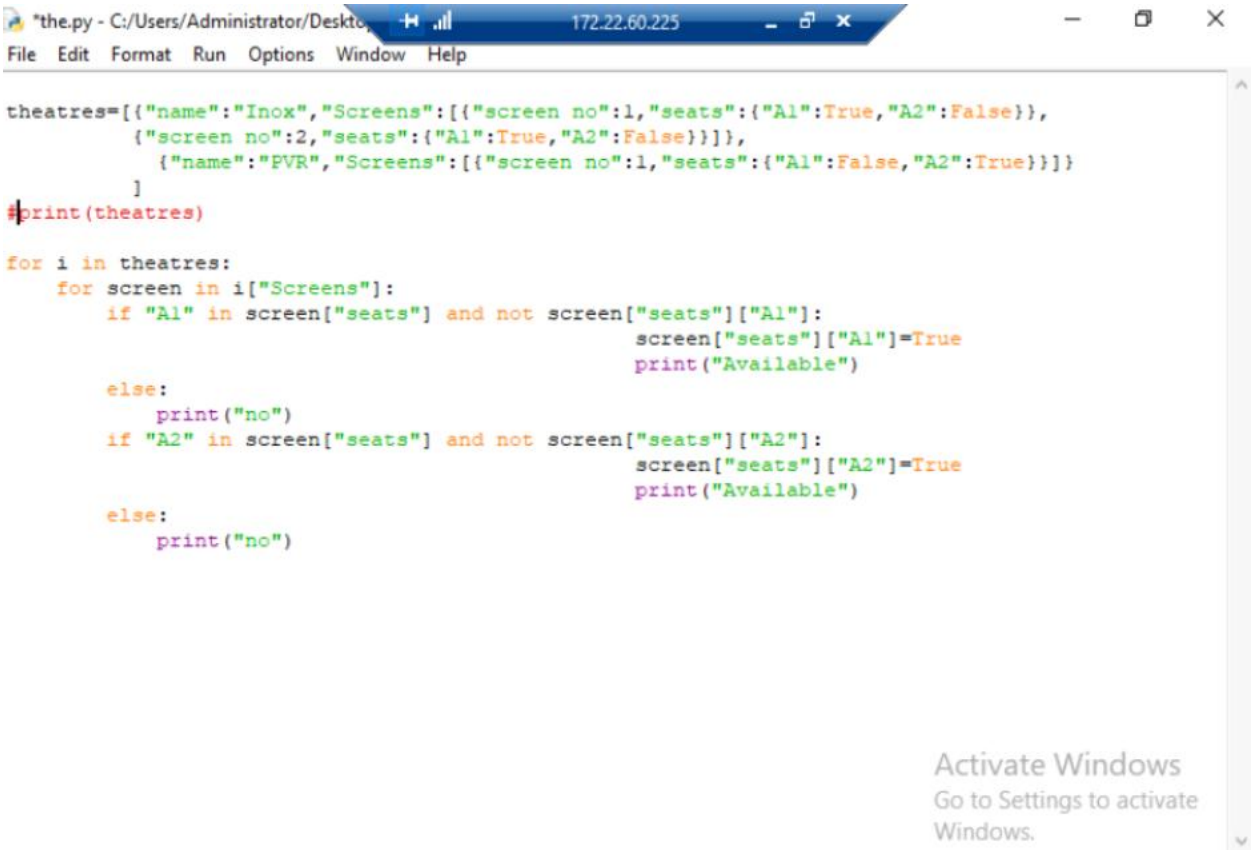
   - o Each screen dictionary has:
     - "screen_number" (int)
     - "seats" (dict mapping seat IDs like "A1" to True/False for booked status).

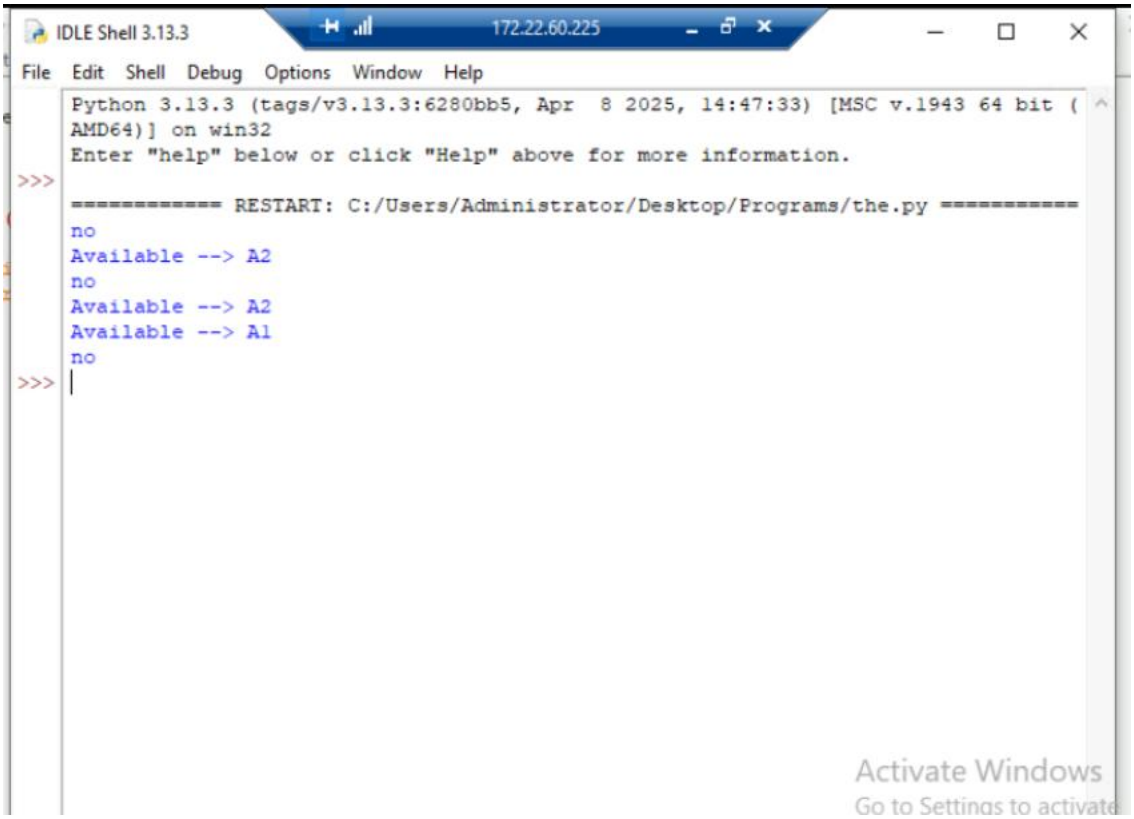
2. Print Theaters
   - o Print the full theaters list.



3. Show Availability

   o For a given theater and screen, list all unbooked seats.





4. Book a Seat
   o Write a function that takes theater name, screen number, and seat ID and marks it booked.
   - For booking a seat similarly iterate every screen and check for availability of particular seat and then
     - If the seat is available print booked and change its value to true
     - Else print already taken

5. Cancel a Screen
   o Remove one screen dictionary from a selected theater.