

Karthick VM
Batch – CIS 1.3

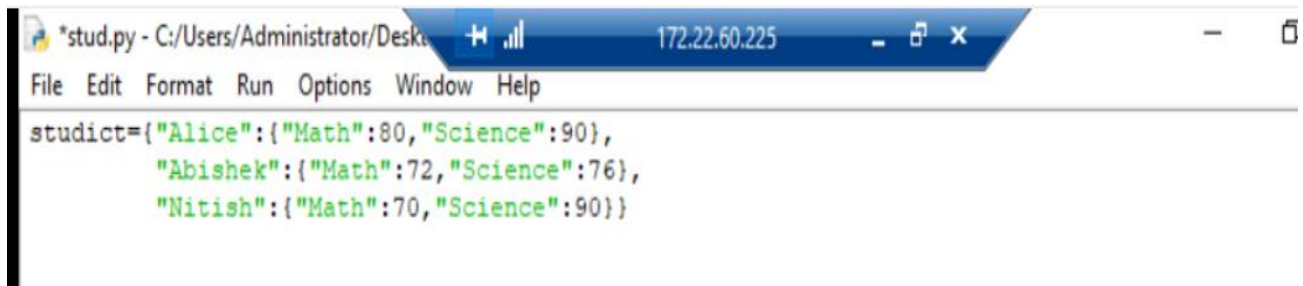
Weekly Python Assessment

Question1:

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

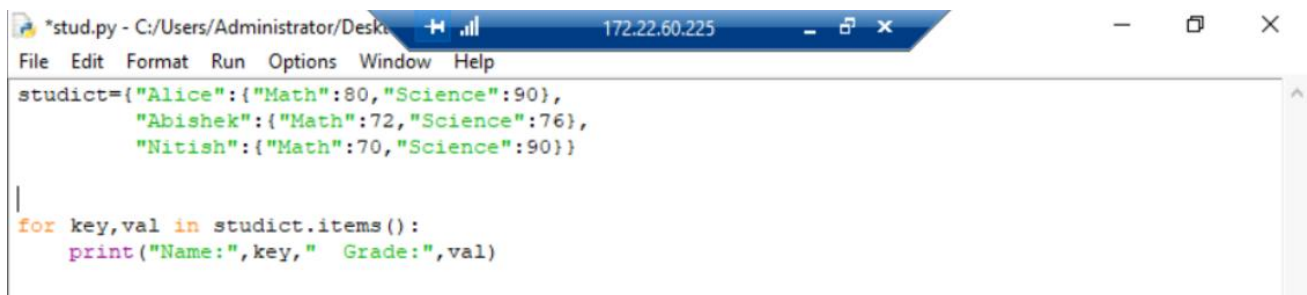
Tasks:

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.



```
*stud.py - C:/Users/Administrator/Desktop 172.22.60.225
File Edit Format Run Options Window Help
studict={"Alice":{"Math":80,"Science":90},
        "Abishek":{"Math":72,"Science":76},
        "Nitish":{"Math":70,"Science":90}}
```

2. Print the students dictionary.



```
*stud.py - C:/Users/Administrator/Desktop 172.22.60.225
File Edit Format Run Options Window Help
studict={"Alice":{"Math":80,"Science":90},
        "Abishek":{"Math":72,"Science":76},
        "Nitish":{"Math":70,"Science":90}}

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

```
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>> ===== 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}
>>> |
```

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)

```

```

Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
===== RESTART: C:/Users/Administrator/Desktop/Programs/stud.py =====
Name: Alice   Grade: {'Math': 80, 'Science': 90, 'English': 76}
Name: Abishek Grade: {'Math': 72, 'Science': 76}
Name: Nitish  Grade: {'Math': 70, 'Science': 90}
>>>

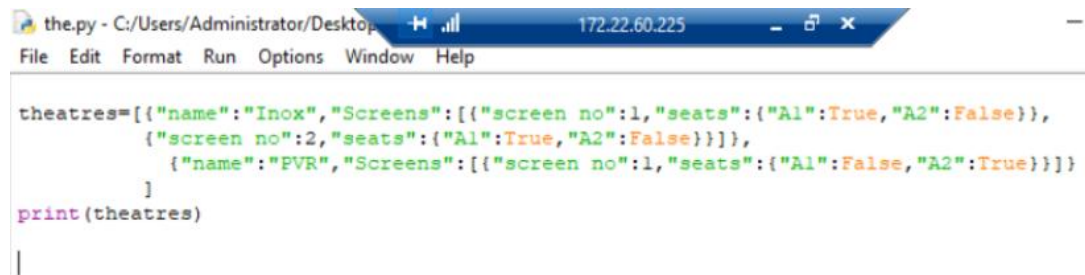
```

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).



```
theatres=[{"name":"Inox","Screens":[{"screen no":1,"seats":{"A1":True,"A2":False}},
          {"screen no":2,"seats":{"A1":True,"A2":False}}]},
          {"name":"PVR","Screens":[{"screen no":1,"seats":{"A1":False,"A2":True}}]}]
print(theatres)
```

2. Print Theaters

- o Print the full theaters list.

```
IDLE Shell 3.13.3 172.22.60.225
File Edit Shell Debug Options Window Help
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (AMD64)] on w
in32
Enter "help" below or click "Help" above for more information.
>>>
===== RESTART: C:/Users/Administrator/Desktop/Programs/the.py =====
[{'name': 'Inox', 'Screens': [{'screen no': 1, 'seats': {'A1': True, 'A2': False}}, {'screen
no': 2, 'seats': {'A1': True, 'A2': False}}]}, {'name': 'PVR', 'Screens': [{'screen no': 1,
'seats': {'A1': False, 'A2': True}}]}]
>>> |
```

3. Show Availability

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

```
"the.py" - C:/Users/Administrator/Desktop/Programs/the.py 172.22.60.225
File Edit Format Run Options Window Help

theatres=[{"name":"Inox","Screens":[{"screen no":1,"seats":{"A1":True,"A2":False}},
          {"screen no":2,"seats":{"A1":True,"A2":False}}]},
          {"name":"PVR","Screens":[{"screen no":1,"seats":{"A1":False,"A2":True}}]}]
print(theatres)

for i in theatres:
    for screen in i["Screens"]:
        if "A1" in screen["seats"] and not screen["seats"]["A1"]:
            screen["seats"]["A1"]=True
            print("Available")
        else:
            print("no")
        if "A2" in screen["seats"] and not screen["seats"]["A2"]:
            screen["seats"]["A2"]=True
            print("Available")
        else:
            print("no")
```

Activate Windows
Go to Settings to activate Windows.

```
IDLE Shell 3.13.3 172.22.60.225
File Edit Shell Debug Options Window Help
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
===== RESTART: C:/Users/Administrator/Desktop/Programs/the.py =====
no
Available --> A2
no
Available --> A2
Available --> A1
no
>>> |
```

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
 - o If the seat is available print booked and change its value to true
 - o Else print already taken

5. Cancel a Screen

- o Remove one screen dictionary from a selected theater.