



বরেন্দ্র বিশ্ববিদ্যালয়
VARENDRA UNIVERSITY



Department of Computer Science and Engineering

29th Batch

Lab Report 4

Course title : Artificial Intelligence Lab

Course Code : CSE - 414

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Signature

Signature

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➤ **Question:** Playing with Python dictionary using the Student Information.

❖ **Solution(Code):**

```
Sec_D = {
    "221311121": {
        "Name": "Nuhan",
        "Cse-321": "A+",
        "Cse-323": "A+",
        "Cse-324": "A+",
        "Eco-331": "A+",
        "Cse-331": "A+",
        "Cse-332": "A+",
        "Cse-333": "A+",
        "Cse-334": "A+",
        "Cse-336": "A+",
        "CGPA": 4.00
    },
    "221311123": {
        "Name": "Raysa",
        "Cse-321": "A-",
        "Cse-323": "C+",
        "Cse-324": "A-",
        "Eco-331": "A-",
        "Cse-331": "A",
        "Cse-332": "A",
        "Cse-333": "B",
        "Cse-334": "B",
        "Cse-336": "D",
        "CGPA": 3.19
    },
    "221311124": {
        "Name": "Promi",
        "Cse-321": "A+",
        "Cse-323": "B+",
        "CGPA": 3.67
    },
    "221311127": {
        "Name": "Raunak",
        "Cse-321": "B",
        "Cse-323": "C+",
        "Cse-324": "A",
        "Eco-331": "A",
        "Cse-331": "A",
        "Cse-332": "A+",
        "Cse-333": "A",
        "Cse-334": "A",
        "Cse-336": "A",
        "CGPA": 3.20
    },
    "221311129": {
        "Name": "Efti",
        "Cse-321": "A-",
        "Cse-323": "B+",
        "Cse-324": "A",
        "Eco-331": "A",
        "Cse-331": "A",
        "Cse-332": "A+",
        "Cse-333": "A+",
        "Cse-334": "A",
        "Cse-336": "A",
        "CGPA": 3.69
    },
    "Cse-334": "A",
    "Cse-336": "A",
}
```

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```

    "221311130": {
      "Name": "Yousuf Ali",
      "Cse-321": "A+",
      "Cse-323": "A",
      "Cse-324": "A",
      "Eco-331": "A",
      "Cse-331": "A",
      "Cse-332": "B+",
      "Cse-333": "A",
      "Cse-334": "A",
      "Cse-336": "B",
      "CGPA": 3.68
    },
    "221311131": {
      "Name": "Nahid Hasan",
      "Cse-321": "A+",
      "Cse-323": "A+",
      "Cse-324": "A+",
      "Eco-331": "A+",
      "Cse-331": "A+",
      "Cse-332": "A+",
      "Cse-333": "A+",
      "Cse-334": "A+",
      "Cse-336": "A+",
      "CGPA": 4.00
    },
    "221311132": {
      "Name": "Tonima",
      "Cse-321": "A+",
      "Cse-323": "B",
      "Cse-324": "A",
      "Eco-331": "A",
      "Cse-331": "A+",
      "Cse-332": "A",
      "Cse-333": "A",

```

```

      "CGPA": 3.65
    },
    "221311133": {
      "Name": "Jeba",
      "Cse-321": "A+",
      "Cse-323": "A+",
      "Cse-324": "A",
      "Eco-331": "A+",
      "Cse-331": "A+",
      "Cse-332": "A-",
      "Cse-333": "A+",
      "Cse-334": "A-",
      "Cse-336": "A+",
      "CGPA": 3.75
    },
    "221311135": {
      "Name": "Tuli",
      "Cse-321": "A+",
      "Cse-323": "A+",
      "Cse-324": "A+",
      "Eco-331": "A-",
      "Cse-331": "A+",
      "Cse-332": "A+",
      "Cse-333": "A+",
      "Cse-334": "A",
      "Cse-336": "A",
      "CGPA": 3.85
    },
    "221311139": {
      "Name": "Homai Ara",
      "Cse-321": "A+",
      "Cse-323": "A+",

```

```

    "221311145": {
      "Name": "Shrabona Rani",

```

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```

    "Cse-324": "A+",
    "Eco-331": "A+",
    "Cse-331": "A+",
    "Cse-332": "A+",
    "Cse-333": "A+",
    "Cse-334": "A+",
    "Cse-336": "A+",
    "CGPA": 4.00
  },
  "221311143": {
    "Name": "Shahed",
    "Cse-321": "A+",
    "Cse-323": "A+",
    "Cse-324": "A+",
    "Eco-331": "A+",
    "Cse-331": "A+",
    "Cse-332": "A+",
    "Cse-333": "A+",
    "Cse-334": "A+",
    "Cse-336": "A+",
    "CGPA": 4.00,
  },
  "221311144": {
    "Name": "Nafiz",
    "Cse-321": "A+",
    "Cse-323": "A",
    "Cse-324": "A",
    "Eco-331": "A+",
    "Cse-331": "A",
    "Cse-332": "A+",
    "Cse-333": "A-",
    "Cse-334": "B+",
    "Cse-336": "A-",
    "CGPA": 3.45,
  },

```

```

    "Cse-321": "A",
    "Cse-323": "A",
    "Cse-324": "A-",
    "Eco-331": "B+",
    "Cse-331": "A+",
    "Cse-332": "A-",
    "Cse-333": "A+",
    "Cse-334": "A",
    "Cse-336": "A-",
    "CGPA": 3.67
  },
  "221311150": {
    "Name": "Niloy",
    "Cse-321": "A+",
    "Cse-323": "A+",
    "Cse-324": "A+",
    "Eco-331": "A+",
    "Cse-331": "A+",
    "Cse-332": "A+",
    "Cse-333": "A+",
    "Cse-334": "A+",
    "Cse-336": "A+",
    "CGPA": 4.00
  },
  "221311151": {
    "Name": "Tasfia",
    "Cse-321": "A-",
    "Cse-323": "A",
    "Cse-324": "B+",
    "Eco-331": "A+",
    "Cse-331": "A-",
    "Cse-332": "A+",
    "Cse-324": "A",
    "Eco-331": "A+",
    "Cse-331": "A-",

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<pre> "Cse-333": "A+", "Cse-334": "A-", "Cse-336": "A", "CGPA": 3.65 }, "221311152": { "Name": "Sukonna", "Cse-321": "A-", "Cse-323": "A", "Cse-324": "A", "Eco-331": "A+", "Cse-331": "A+", "Cse-332": "B+", "Cse-333": "A+", "Cse-334": "A", "Cse-336": "A-", "CGPA": 3.42 }, "221311154": { "Name": "Maruf", "Cse-321": "A-", "Cse-323": "A", "Cse-324": "A", "Eco-331": "A+", "Cse-331": "A+", "Cse-332": "A+", "Cse-333": "A+", "Cse-334": "A", "Cse-336": "A", "CGPA": 3.72, }, "221311156": { "Name": "Saykat", "Cse-321": "A-", "Cse-323": "B+", </pre>	<pre> "Cse-332": "A", "Cse-333": "A+", "Cse-334": "A", "Cse-336": "A-", "CGPA": 3.32 }, "221311159": { "Name": "Nafisa", "Cse-321": "A+", "Cse-323": "A-", "Cse-324": "B+", "Eco-331": "A", "Cse-331": "A+", "Cse-332": "A+", "Cse-333": "A+", "Cse-334": "A-", "Cse-336": "A", "CGPA": 3.50 }, "221311160": { "Name": "Zeba", "Cse-321": "A+", "Cse-323": "B", "Cse-324": "B+", "Eco-331": "A", "Cse-331": "A+", "Cse-332": "A+", "Cse-333": "A+", "Cse-334": "A", "Cse-336": "A-", "CGPA": 3.61 } </pre>
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```

course_code = input("Enter course code: ")
print("Course Code:",course_code)

result = [Sec_D[var][course_code] for var in Sec_D]
print("Result for: ",result)

print()

id = input("Enter Student ID: ")
print("Student id:",id)
if id in Sec_D:
    result = Sec_D[id]["CGPA"]
    print("Result is:",result)
else:
    print("ID not found.")

```

❖ Input & Output:

Cse-323

Enter course code: (Press 'Enter' to confirm or 'Escape' to cancel)

221311131

Enter Student ID: (Press 'Enter' to confirm or 'Escape' to cancel)

Course Code: Cse-323

Result for Cse-323 : ['A+', 'C+', 'B', 'A', 'A', 'C+', 'C', 'B+', 'A', 'A+', 'B', 'A+', 'A+', 'A+', 'B', 'A+', 'A', 'A', 'B+']

Student id: 221311131

Result is: 4.0

- ❖ **Conclusion:** In this lab, I learned how to use list comprehension to efficiently display specific information. First, I created a dictionary called Sec_D to store details about the students. Then, using list comprehension, I Sort the data to display the results of students enrolled in the CSE-323 course. Lastly, I was able to show my GPA by looking up my ID in the dictionary. This approach made it easier and faster to work with large sets of student information.