AI Assignment 3 Output

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Rules :-

Input attributes -

- **field:** CS, ECE, AI, design, ECA
- **type:** theory, performative, competitive, physical, non-physical
- **interest:** math, language, visuals, networks, probsolve, hardware, art, video, webdev

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1. field(AI) ∧ interest(math) → prospect(ML)

2. field(AI) ∧ type(theory) → course(AI)

3. prospect(ML) ∧ interest(language) → course(NLP)

4. prospect(ML) ∧ interest(visuals) → course(CV)

5. field(CS) ∧ type(theory) → prospect(coreCS)

6. prospect(coreCS) → course(ADA)

7. prospect(coreCS) → course(DBMS)

8. prospect(coreCS) ∧ interest(networks) → course(CN)

9. prospect(coreCS) ∧ interest(probsolve) ∧ interest(math) → activity(CP)

10. field(CS) ∧ interest(probsolve) → course(DSA)

11. field(ECA) ∧ interest(language) → activity(debate), activity(writing)

12. field(ECE) ∧ interest(hardware) → activity(robotics)

13. field(ECE) ∧ interest(visuals) → course(DIP)

14. field(design) ∧ interest(visuals) → prospect(designer)

15. prospect(designer) ∧ interest(art) → activity(graphic design)

16. prospect(designer) ∧ interest(video) → activity(video editing)

17. field(design) ∧ interest(webdev) → activity(frontend)

18. course(DBMS) ∧ interest(webdev) → activity(backend)

19. activity(frontend) ∧ activity(backend) → activity(fullstack)

20. field(ECA) ∧ type(performative) → activity(dance), activity(drama)

21. field(ECA) ∧ type(competitive) → prospect(sports)

22. prospect(sports) ∧ type(physical) → activity(football), activity(basketball)

23. prospect(sports) ∧ type(non-physical) → activity(chess)

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```
In [6]: f, i, t = takeinput()
        print()
        for x in f:
          assert_fact('system', {'field': x})
        for x in i:
          assert_fact('system', {'interest': x})
        for x in t:
          assert_fact('system', {'type': x})
```

```
Choose the fields you would like to explore
Enter corresponding numbers line by line
Enter end to stop input
)
1 CS
2 ECE
3 AI
4 design
5 ECA
1
3
5
end

Choose the topics you are interested in
Enter corresponding numbers line by line
Enter end to stop input
)
1 math
2 language
3 visuals
4 network
5 problem-solving
6 hardware
7 art
8 video
9 webdev
1
3
```

We can input fields, topics and our preferences to the system.

```
Fact: take course Computer vision
Fact: take course Data structures and algorithms
Fact: take course Artificial Intelligence
Fact: take course Analysis and design of algorithms
Fact: take course Database management system
Fact: try activity Competitive programming
Fact: try activity Back-end developer
Fact: try activity Football
Fact: try activity Basketball
```

In [7]:
```python
print('Suggested courses and activities -\n')
system = get_facts('system')
for rule in system:
  if 'course' in rule:
    print('course:', rule['course'])
  elif 'activity' in rule:
    print('activity:', rule['activity'])
```

```
Suggested courses and activities -

course: DSA
activity: CP
activity: backend
activity: basketball
course: AI
activity: football
course: ADA
course: CV
course: DBMS
```

The system will output the courses and activities that are suitable for us depending on the facts entered.

```
[4]  assert_fact('system', {'field': 'AI'})
     assert_fact('system', {'interest': 'math'})
     assert_fact('system', {'type': 'theory'})
     assert_fact('system', {'interest': 'language'})

     Fact: take course Artificial Intelligence
     Fact: take course Natural language processing
     {'$s': 1, 'id': 'sid-0', 'sid': '0'}
```

```
     assert_fact('system', {'field': 'CS'})

     Fact: take course Analysis and design of algorithms
     Fact: take course Database management system
     {'$s': 1, 'id': 'sid-0', 'sid': '0'}
```

```
[6]  assert_fact('system', {'interest': 'network'})

     Fact: take course Computer networks
     {'$s': 1, 'id': 'sid-0', 'sid': '0'}
```

```
     assert_fact('system', {'interest': 'webdev'})
     assert_fact('system', {'interest': 'problem-solving'})

     Fact: try activity Back-end developer
     Fact: take course Data structures and algorithms
     Fact: try activity Competitive programming
```

Instead of input, run the prewritten assertions to see how system builds up new facts as we provide it with more facts