EXPLANATION

I implemented the NLI interface in the Interface.py file and stored the extracted facts from the user input in the facts.pl file, which the prolog program takes to predict the electives.

The interface program first asks the user about their interest from the mentioned interests. The user input is then tokenized, and stemming is performed on the tokens we got and stored in the list. I then join the user tokens into a string separated by the spaces and use the regex library to search the mentioned interests in the user string. If interest is not found, we put 0 in the list, and if found, we put 1 in the list, and this is done for each interest. I then write this list into the facts file and then call the prolog program, which consults the new prolog file and then find the career whose interest aligns with the user interest and prints those. The interface program ask the user which career he wanted to take and then writes the career in the facts file as fact and it again calls the prolog program which uses the given career and then prints which are the fundamental courses in this career to proceed further. The user then selects the fundamental courses he have taken and the interface program writes those fundamental courses in the fact file and then the prolog program checks which electives could be offered whose electives are done by the user and then it prints those

TEST CASE1

```
┌──(pyswip_env)(abhit㉿Abhit)-[~/PrologCoding]
└─$ python3 Interface.py
Please tell what you like from these set of interests:['technology', 'coding
', 'theoritical_maths', 'mathematical_aptitude', 'discrete_maths', 'statisti
c', 'programming', 'circuit_designing', 'current_flow', 'analyzing_comparing
_things', 'low_level_programming', 'competitive_nature', 'cybersecurity', 'e
lectron_proton_behavior', 'team_work', 'building_projects']
Answer:
I like technology, and also the coding. My recent interest are also discrete
_maths, and competitive_nature. Now I likes mathematical_aptitude
```

```
          Careers                                        Code

------------------------------
Blockchain Developer                        c6
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Competitive Programmer                   c5
------------------------------
Enter the Career you want to take:
c5

Below are the mentioned fundamental courses which you should have taken to t
ake further courses.
ip
cp
dsa
```

```
Enter the courses which you have done(Note Use--> t for stop entering the co
urses you have taken)
cp
dsa
t

Here are the Courses you are eligible to take:
os                    Level(_x): 2
aag                    Level(_x): 5
ada                    Level(_x): 2
```

TEST CASE: 2

```
┌──(pyswip_env)(abhit㉿Abhit)-[~/PrologCoding]
└─$ python3 Interface.py
Please tell what you like from these set of interests:['technology', 'coding
', 'theoritical_maths', 'mathematical_aptitude', 'discrete_maths', 'statisti
c', 'programming', 'circuit_designing', 'current_flow', 'analyzing_comparing
_things', 'low_level_programming', 'competitive_nature', 'cybersecurity', 'e
lectron_proton_behavior', 'team_work', 'building_projects']
Answer:
I really like technology and theoritical_maths. Had a natural interest in st
atistic and analyzing_comparing_things
```

```
          Careers                                          Code

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Data Scientist                                        c3
------------------------------
Enter the Career you want to take:
c3

Below are the mentioned fundamental courses which you should have taken to t
ake further courses.
ip
la
pns
m3
dbms
dsa
```

```
Here are the Courses you are eligible to take:
sweb                    Level(_x): 3
ai                     Level(_x): 6
ada                     Level(_x): 2
ap                     Level(_x): 2

┌──(pyswip_env)(abhit㉿Abhit)-[~/PrologCoding]
└─$
```