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Output1:

C:\Windows\System32\cmd.exe

```
(venv) C:\Users\HP\Downloads\Elective-Advisory-System-for-IIITD-2.0-main\code>python Ass5_nl_final.py
System: Please Enter your name:
You: Ritisha

System: Hello  Ritisha !!
System: First year student? If yes then this is the right place for you.
If not, Nothing to worry! Still I can Help.
This is an advisory system which will suggest you the electives on your interest.

System: What is the current CGPA going on (if not then enter Btech CGPA)?
You: 9.7

System: Amoung the list of subjects, you incline towards which subject?
1) Mathematics.
2) Database Management System.
3) Computer Networks.
You:
I am inclined towards Mathematics subject

System: Sure, great choice. You will surely do well in MATHS.
Let's try to find the electives which you can take.
System: Rate yourself from 0 to 4.
0 => no knowledge/interest
1 => low knowledge/interest
2 => medium knowledge/interest
3 => high knowledge/interest
4 => very high knowledge/interest

Please answer the following question asked below:-
1. Interested in constructing statistical models based on Baye's Theorem? um no knowledge
2. Interest in Statistics on the scale of ? medium knowledge
3. Interest in Probablity on the scale of? i love probability i have high knowledge in probability
4. Aspiring to work on large datasets? i have medium interest in this
List of Elective that you can take:
SML
Probability and Random Processes
DM
[{'X': 'Statistical Machine Learning (CSE542)'}, {'X': 'Probability and Random Processes (ECE501)'}, {'X': 'Data Mining (CSE506)'}]
Thank you.

(venv) C:\Users\HP\Downloads\Elective-Advisory-System-for-IIITD-2.0-main\code>
```

OUTPUT2:

C:\Windows\System32\cmd.exe

```
(venv) C:\Users\HP\Downloads\Elective-Advisory-System-for-IIITD-2.0-main\code>python Ass5_nl_final.py
System: Please Enter your name:
You: Mohit

System: Hello  Mohit !!
System: First year student? If yes then this is the right place for you.
If not, Nothing to worry! Still I can Help.
This is an advisory system which will suggest you the electives on your interest.

System: What is the current CGPA going on (if not then enter Btech CGPA)?
You: 8.7

System: Amoung the list of subjects, you incline towards which subject?
1) Mathematics.
2) Database Management System.
3) Computer Networks.
You:
I like database management system

System: Sure, great choice. You will surely do well in DBMS.
Let's try to find the electives which you can take.
System: Rate yourself from 0 to 4.
0 => no knowledge/interest
1 => low knowledge/interest
2 => medium knowledge/interest
3 => high knowledge/interest
4 => very high knowledge/interest

Please answer the following question asked below:-
1. Designing and developing databases? high interest
2. Retrieving data from a database management system? very high knowledge because i love this
3. Compiling data from multiple sources into a single data repository.?medium interest
List of Elective that you can take:
Database System Implementation
Database Methods in Information Retrieval
IIA
[{'X': 'Database System Implementation (CES507)'}, {'X': 'Database Methods in Information Retrieval'}, {'X': 'Information Integration and Application (CSE656)'}]
Thank you.

(venv) C:\Users\HP\Downloads\Elective-Advisory-System-for-IIITD-2.0-main\code>=
```

Code:

```python
import nltk
from nltk.tokenize import word_tokenize
from nltk.stem import PorterStemmer
from pyswip import Prolog

print('System: Please Enter your name: ')
name = input('You: ')
print()
print('System: Hello  {} !!'.format(name))
print('System: First year student? If yes then this is the right place for you.')
```

```
print('If not, Nothing to worry! Still I can Help.')
print('This is an advisory system which will suggest you the electives on your
interest.')
print()
print('System: What is the current CGPA going on (if not then enter Btech
CGPA)?')
cg = input('You: ')
print()

print('System: Amoung the list of subjects, you incline towards which subject?')
print('1) Mathematics.')
print('2) Database Management System.')
print('3) Computer Networks.')
#print('4) Opearting Syatem [OS]')
print('You:  ')
subj = input()

#tokeninzing + stemming the subjects
ps = PorterStemmer()
subj_input = word_tokenize(subj)
subj_input_stem = []
for i in subj_input:
    subj_input_stem.append(ps.stem(i))

# checking for maths
if ('math' in subj_input_stem) or ('mathemat' in subj_input_stem) or ('maths' in
subj_input_stem):
        subj = 'maths'

# checking for dbms
if 'data' in subj_input_stem or 'manag' in subj_input_stem or 'syst' in
subj_input_stem or 'database' in subj_input_stem:
    subj = 'dbms'

# checking for cn
if ('computer' in subj_input_stem) or ('network' in subj_input_stem) or ('cn' in
subj_input_stem):
    subj = 'cn'

print("\nSystem: Sure, great choice. You will surely do well in {}.\nLet's try to
find the electives which you can take.".format(subj.upper()))
print('System: Rate yourself from 0 to 4.')
print('0 => no knowledge/interest')
print('1 => low knowledge/interest')
print('2 => medium knowledge/interest')
```

```
print('3 => high knowledge/interest')
print('4 => very high knowledge/interest')
print()

#mapping of interst to numbers.
def mapping_to_number(x):
    x = word_tokenize(x)  # tokenizing
    ps = PorterStemmer()  # for stemming
    lst = []                # list to have words after stemming
    for i in x:
        lst.append(ps.stem(i))
    if 'no' in lst:
        return 0
    elif 'low' in lst:
        return 1
    elif 'medium' in lst or 'med' in lst or 'mid' in lsts:
        return 2
    elif 'high' in lst:
        return 3
    elif 'very' in lst or 'high' in lst:
        return 4

#opening a file and then adding facts into file.
file = open("temporary.pl", 'w')

if subj == 'maths':
    print('Please answer the following question asked below:-')
    x = input("1. Interested in constructing statistical models based on Baye's
Theorem?")
    x = mapping_to_number(x)
    file.write("interest('Bayesian Machine Learning (BML)',{}).\n".format(x))
    x = input("2. Interest in Statistics on the scale of ?")
    x = mapping_to_number(x)
    file.write("interest('Statistical Machine Learning
(CSE542)',{}).\n".format(x))
    x = input("3. Interest in Probablity on the scale of?")
    x = mapping_to_number(x)
    file.write("interest('Probability and Random Processes
(ECE501)',{}).\n".format(x))
    x = input("4. Aspiring to work on large datasets?")
    x = mapping_to_number(x)
    file.write("interest('Data Mining (CSE506)',{}).\n".format(x))
    file.close()

if subj == 'dbms':
```

```
    print('Please answer the following question asked below:-')
    x = input("1. Designing and developing databases?")
    x = mapping_to_number(x)
    file.write("interest('Database System Implementation
(CES507)',{}).\n".format(x))
    x = input("2. Retrieving data from a database management system?")
    x = mapping_to_number(x)
    file.write("interest('Database Methods in Information
Retrieval',{}).\n".format(x))
    x = input("3. Compiling data from multiple sources into a single data
repository.?")
    x = mapping_to_number(x)
    file.write("interest('Information Integration and Application
(CSE656)',{}).\n".format(x))
    file.close()

if subj == 'cn':
    print('Please answer the following question asked below:-')
    x = input("1. Interest in learning basic security concepts?")
    x = mapping_to_number(x)
    file.write("interest('Foundations to Computer Security
(CSE545)',{}).\n".format(x))
    x = input("2. Retrieving data from a database management system?")
    x = mapping_to_number(x)
    file.write("interest('Ethical Hacking (CSE798A)',{}).\n".format(x))
    x = input("3. Compiling data from multiple sources into a single data
repository.?")
    x = mapping_to_number(x)
    file.write("interest('Network Anonymity and Privacy
(CSE749)',{}).\n".format(x))
    file.close()

print()
print("List of Elective that you can take: ")
# consulting file
swipl = Prolog()
swipl.consult("choices.pl")
print()
print("In list format:")
elective_list = list(swipl.query("eligible(X)"))
print(elective_list)
print()
print('Thank you.!!')
```