

Assignment 4

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For this assignment we are supposed to build a small natural language interface that will provide inputs to our career advisory system developed in prolog.

Assumption: The user will provide one of the given option in its answer.

I have created a python file which asks question to the user and gives option. The user gives the answer in the form of string.

Preprocessing steps done for the input strings are as follows:

1. Input string is converted into lower case.
2. All the punctuation marks like, !, @, #, ., &, etc. are removed from the given string using string library.
3. All the words in the string are tokenized and split on the basis of space.
4. Lemmatization is done which converts the words into their root words in a meaningful way.

Here I am giving various career options like:

- Master in Science (MS).
- Masters in Technology (MTech).
- Masters in Business Administration (MBA).
- IT jobs like Software Developer, Data Analyst, and System Designer.
- Government jobs like working in the public sector or teaching jobs.
- A career in defence.
- Traveling related options like Journalist, Event Planner, Travel Advisor, Photographer, etc.
- Other career options like Graphic Designer, Interior Designer, Fashion Designer.

Different parameters considered are:

- Physical or Mental work.
- Aptitude marks.
- Technical or non-technical person.
- Done coding or not.
- Exams given - GRE, CAT, GATE, None.
- Business oriented.
- Leadership skill.
- Risk taker.
- Creative and innovative.
- Traveller or non-traveller.

Screenshots :

1. Python interface:

Do you like physical work or work which includes problem solving?

1. Physical

2. Logical

I love doing logical work.

Are you good in aptitude?

1. Yes

2. No

Yes, I am good at aptitude.

Are you a technical or non-tech person?

1. Technical

2. Non-tech

I am a technical person.

Which exam you cleared?

1. GATE

2. GRE

3. CAT

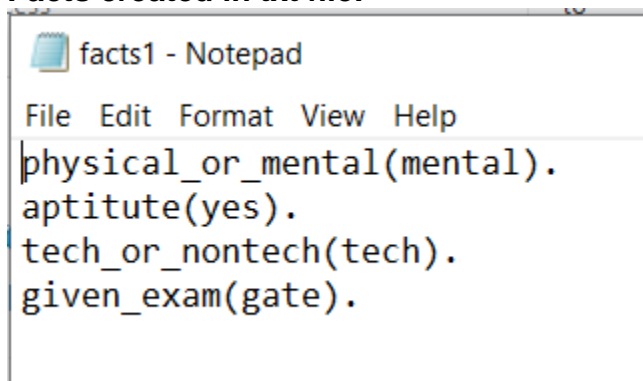
4. None

I have cleared gate exam.

Your facts are successfully saved in facts.txt file.

Now you can use prolog for advicing career

Facts created in txt file:



Prolog output for above file:

```
?- start.  
Career Advisory System.  
Welcome !! We will try to advice best career option for you.  
We will give you different options.  
You seems to be interested in research.  
You have cleared gate cutoff and you are interested in technology.  
So, you can go for higher studies  
Suggestion: Masters in Technology.  
true.
```

2. Python interface:

```
Do you like physical work or work which includes problem solving?  
1. Physical  
2. Logical  
I would like to do logical work.  
Are you good in aptitude?  
1. Yes  
2. No  
yes  
Are you a technical or non-tech person?  
1. Technical  
2. Non-tech  
I am non-tech person.  
Are you interested in doing business?  
1. Yes 2. No  
yes, I love business and marketing related things.  
Your facts are successfully saved in facts2.txt file.  
Now you can use prolog for advicing career
```

Fact file created:



facts2 - Notepad

```
File Edit Format View Help  
physical_or_mental(mental).  
aptitude(yes).  
tech_or_nontech(nontech).  
business_oriented(yes).
```

Prolog output:

?- start.

Career Advisory System.

Welcome !! We will try to advice best career option for you.

We will give you different options.

You are a non-technological person but you are good in aptitude and you are a risk taker.

You are interested in business and you have good management skills and well as you are a good leadership.

We would suggest you following job options

1. You can start your own business.
2. Be an entrepreneur.
3. Join any business related company.

true.

3. Python interface:

Do you like physical work or work which includes problem solving?

1. Physical
2. Logical

I love fitness and physical work.

Are you a good leader?

1. Yes
2. No

yes.

Are you a risk taker?


1. Yes
2. No

yes. I love taking risk.

Your facts are successfully saved in facts3.txt file.

Now you can use prolog for advicing career

Fact file created:

 facts3 - Notepad

File Edit Format View Help

```
physical_or_mental(physical).  
leadership(yes).  
risk_taker(yes).
```

Prolog output:

?- start.

Career Advisory System.

Welcome !! We will try to advice best career option for you.

We will give you different options.

You seems to be physically fit.

You are a risk taker and can adapt to any situation.

We would suggest you following job options

1. Join India Army Force.

2. Join India Air Force.

3. Join India Navy Force.

true.

4. Python interface:

Do you like physical work or work which includes problem solving?

1. Physical

2. Logical

I like logical things.

Are you good in aptitude?

1. Yes

2. No

no.

Are you a technical or non-tech person?

1. Technical

2. Non-tech

I am a non-tech person.

Are you a traveller or non-traveller?

1. Traveller

2. Non-Traveller Yes , I like travelling a lot, so you can call me a traveller.

Are you a person of creative and innovative ideas?

1. Yes

2. No

yes, I am a creative person.

Your facts are successfully saved in facts4.txt file.

Now you can use prolog for advicing career

Facts created:



facts4 - Notepad

File Edit Format View Help

```
physical_or_mental(mental).  
aptitude(no).  
tech_or_nontech(nontech).  
traveller_nontraveller(traveller).  
creative_and_innovative(yes).
```

Prolog output:

?- start.

Career Advisory System.

Welcome !! We will try to advice best career option for you.

We will give you different options.

Sorry, we are unable to help you.

You can take a break for this year or try to explore your new interestes.

true.

?- ■