

Artificial Intelligence - Assignment 5

Natural Language Interface for Recommendation System

The Recommendation System that was made in assignment 1 has been revamped by using natural language and python to make the input more seamless. This makes it more friendly for the user as the engine in prolog is a bit hostile during it's input phase.

Algorithm

The major change is the introduction of python and natural language. The nltk library has been used for the same. It does the processing of the input and creates facts in a text file called "facts.txt," which prolog consults during its runtime. There is a function called start, which takes care of all this and pressing tab just prints the recommendations for the previous set of inputs in a breeze.

Screenshots

The screenshot shows the VS Code editor with the `main.py` file open. The Explorer sidebar on the left shows the project structure with files like `ass4.py`, `facts.txt`, `final.pl`, `electives.pl`, `assignment_4.pl`, and `suggest_electives.pl`. The main editor displays the following Python code:

```
def help(name):  
    semester = input("Enter your semester (odd or even) ")  
    branch = input("Enter your branch (cse/csai/csd/csam/csss/ece) ")  
    interest = input("Please enter your interest (Research/Security/Economics) ")
```

The terminal at the bottom shows the execution of `python main.py`. It prompts the user for their name (Haider), semester (odd), branch (cse), interest (Jobs), and whether they have completed subjects 'DBMS', 'ADA', and 'AP'. The output shows the program's response to these inputs.

The screenshot shows the VS Code editor with the `facts.txt` file open. The Explorer sidebar on the left shows the project structure with files like `ass4.py`, `main.py`, `facts.txt`, `final.pl`, `electives.pl`, `assignment_4.pl`, and `suggest_electives.pl`. The main editor displays the following Python code:

```
1 recommend('Big Data Analytics').  
2 recommend('Alogirithm Apporximation').  
3 recommend('Advanced Algorithms').  
4
```

The terminal at the bottom shows the execution of `python main.py` and `swipl`. It prompts the user for their name (Haider), semester (odd), branch (cse), interest (Jobs), and whether they have completed subjects 'DBMS', 'ADA', and 'AP'. The output shows the program's response to these inputs. The terminal also shows the execution of `swipl` and the output of the `consult('final.pl')` command, which returns `true`.