AI Assignment 1

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Sample Screenshots of Working program:

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?-
% c:/Users/dell/Dropbox/My PC (DESKTOP-DKG8LHI)/Documents/Prolog/Sample_codes/Assignment-1.pl compiled 0.02 sec, 80 clauses
?- main.
#####################################################
----------------------Welcome------------------------
#####################################################
     Electives Prediction System for IIIT Delhi

What is your name: raghavendra.
Enter the number of semesters successfully completed|: 3.
Enter your SGPA in Semester 3: |: 8.

Enter your SGPA in Semester 2: |: 7.

Enter your SGPA in Semester 1: |: 9.


Your final CGPA is: 8.0
What is your branch in IIITD:

1.csb
2.csd
3.csam
4.cse
5.csai
6.csss
|: csb.
Have you done any projects(yes:1, no:0) : |: 1.
Further, We would like you to answer a few more questions:)
Rank your interests in the following future career areas from 1 to 5
1 means least interest and 5 means high interest
Do you have interest in:
Biological Sciences|: 5.
Do you have interest in:
Mathematical Biology|: 2.
Do you have interest in:
Probabilistic and Statistical Mathematics|: 2.
Do you have interest in:
Maths involving proofs and lemmas|: 2.
Do you have interest in:
Sociology and Anthropology|: 2.
Do you have interest in:
Psychology|: 1.
Do you have interest in:
Economics and Finance|: 4.
Do you have interest in:
Design and Video Editing|: 2.
Do you have interest in:
Algorithms and Computing|: 2.
Do you have interest in:
Theoretical Computer Science|: 2.
```

```
Do you have interest in:
Theoretical Computer Science|: 2.
Do you have interest in:
Machine Learning and AI|: 2.
Do you have interest in:
Computer Security|: 2.

Write your grade(0-10) in the below mentioned courses
Write 0 if you haven't done the course

What are your marks in:
Cell Biology and BioChemistry|: 8.
What are your marks in:
Genetics and Molecular Biology|: 9.
What are your marks in:
Money and Banking|: 7.
What are your marks in:
Econometrics|: 0.
You are all set to go for your ideal elective now!!

raghavendra
Based on your inputs, We have finalised the below courses for you
COURSE CODE      COURSE TITLE
######################################################
bio601      Foundations of Modern Biology

bio544      Computational Gastronomy

bio510      Algorithms in Bioinformatics

eco333      Game Theory

eco338      Microeconomics

eco339      Foundations of Finance

################################################
See you again, raghavendra
true .

?-
```

Code Summary:

Note: The Prolog code is well commented mentioning the functionalities of all the functions along with the knowledge base(rules and facts).

1. The user is asked details like name, branch, no. of semesters completed, SGPAs in each semester, project done. These details are asserted as facts dynamically.
2. User is asked about their future career areas from a set of options wherein they specify their interest level on a scale of 1-5. This data is also asserted as facts.
3. The elective options are narrowed down based on a threshold(>=4) on the interest level.
4. User is asked marks in core courses related to the interest area only. This is to identify the pre requisites and whether the student has passed successfully or not in a core course.
5. Based on this data rules regarding different elective courses are created with pre conditions on pre requisites, projects done, career interest, branch etc.
6. In case the user is eligible to take a particular course, he/she is displayed the list of courses along with the course codes.
7. The interface is user friendly and interactive. Concepts of lists, backtracking and recursion, input/output, binding are used throughout the program.

Tree Diagram of Workflow