**Deen Dayal Upadhyaya College University of Delhi**



ARTIFICIAL INTELLIGENCE

NEP PRACTICALS

Course: Bsc (Hons) Computer Science

Semester: 6

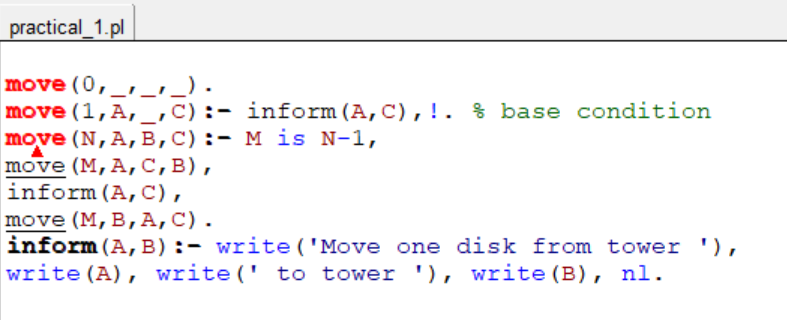
UPC: 32341601

Submitted To: Submitted By:

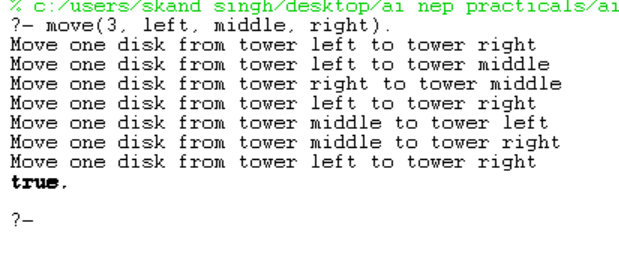
**Dr. Anuja Soni Anupam Jena**

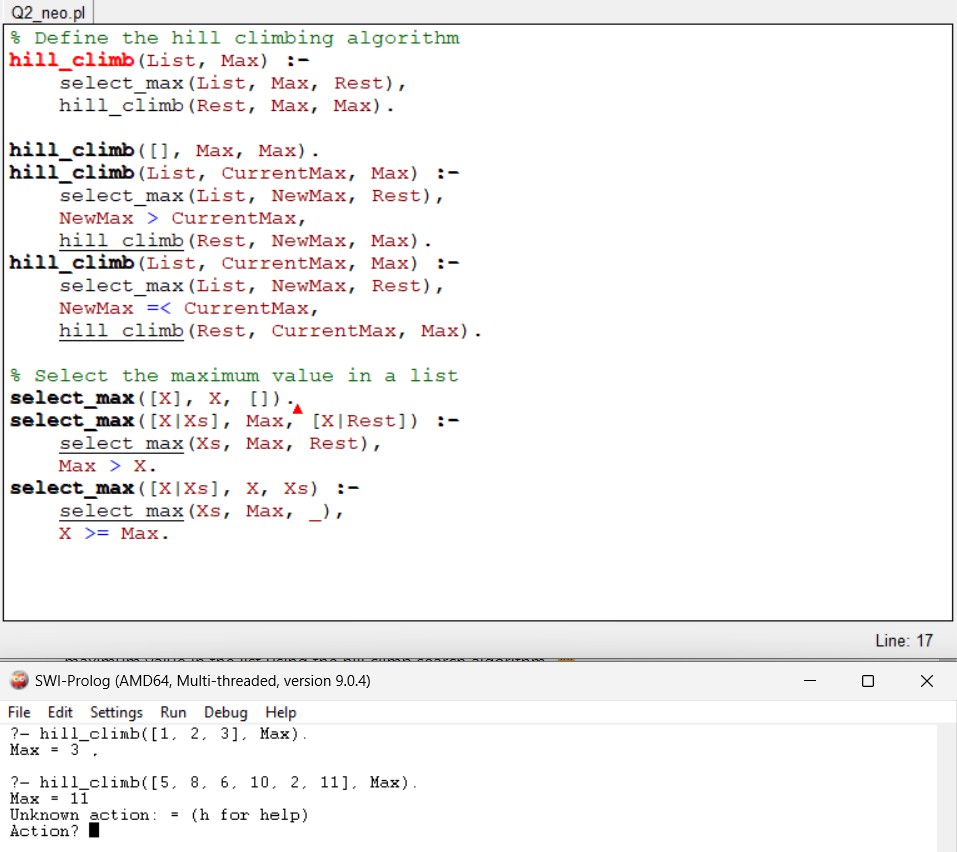
**(21HCS4119)**

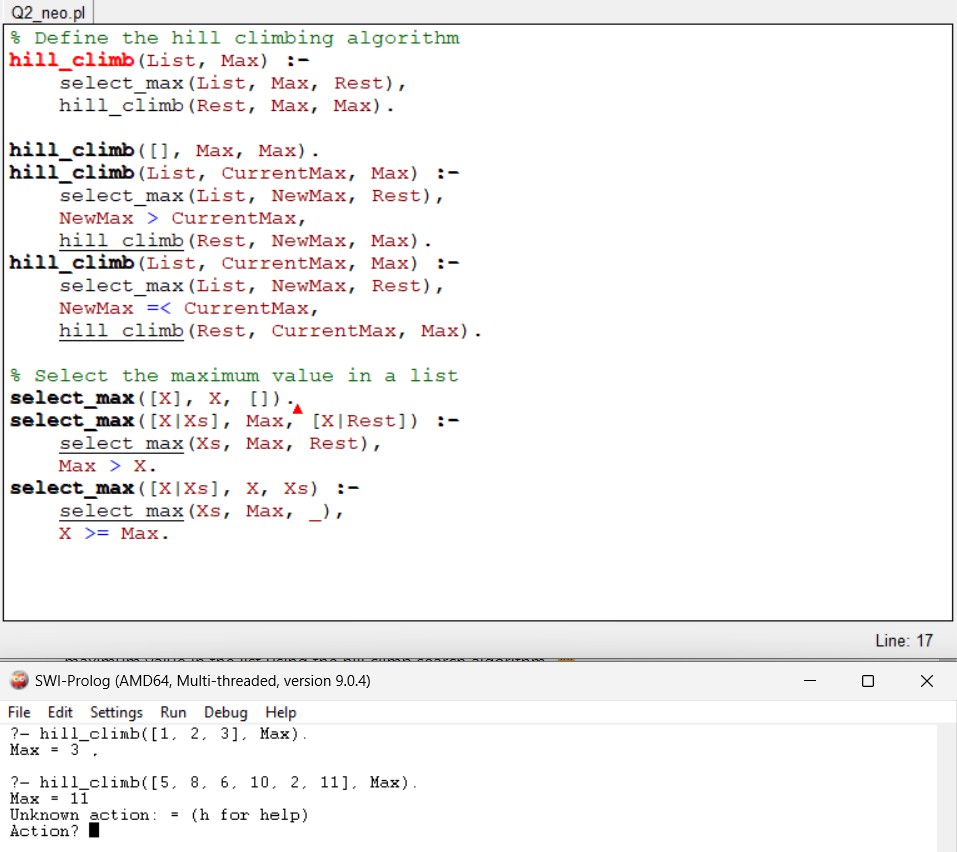
1. Write a program in Prolog to implement TowerOfHanoi(N) where N represents the number of disks.



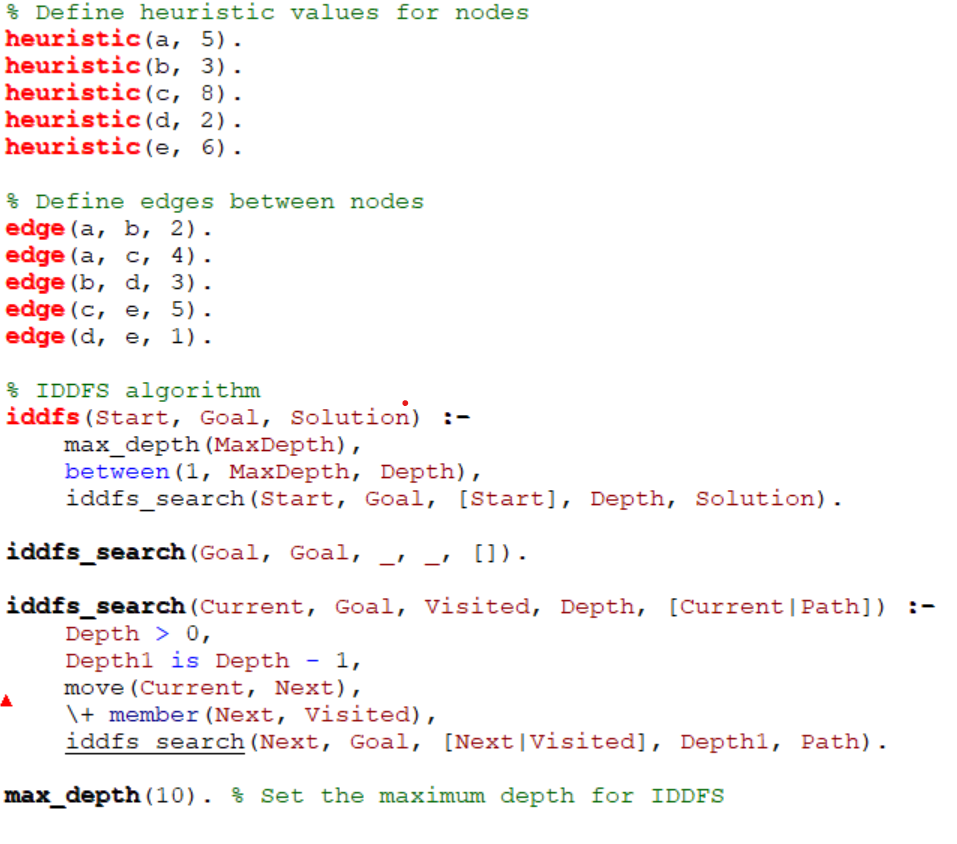
**Output:**



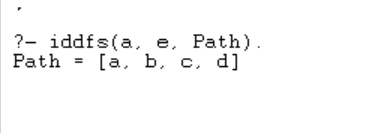
2. Write a program to implement the Hill climbing search algorithm in Prolog.

**Output:**

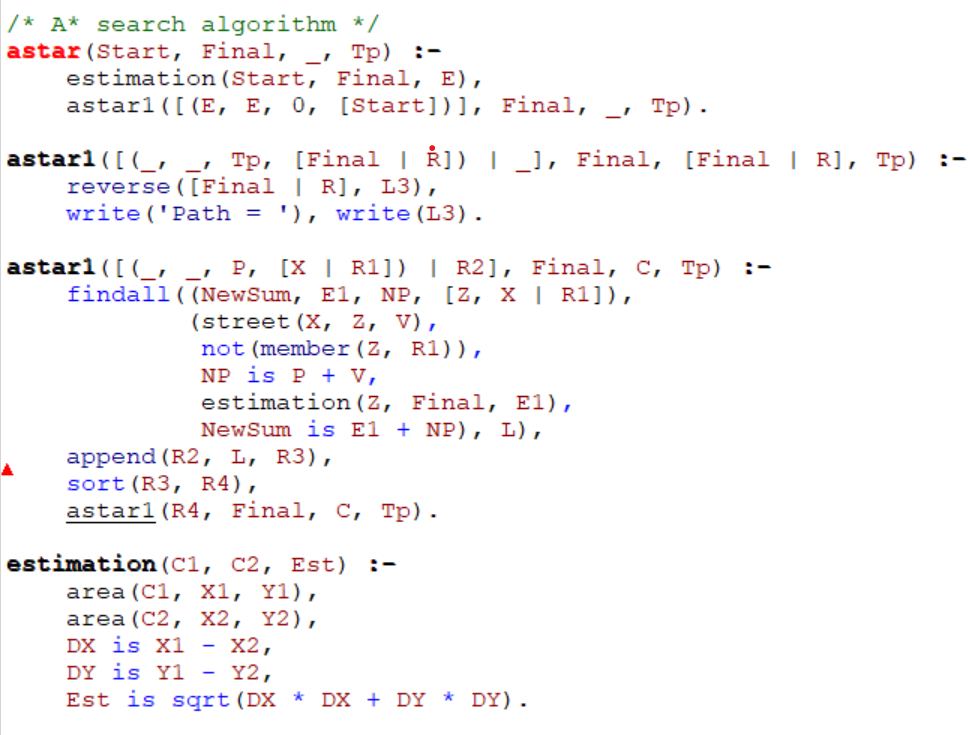
3. Write a program to implement the Best first search algorithm in Prolog.

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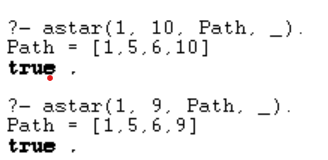
**Output:**



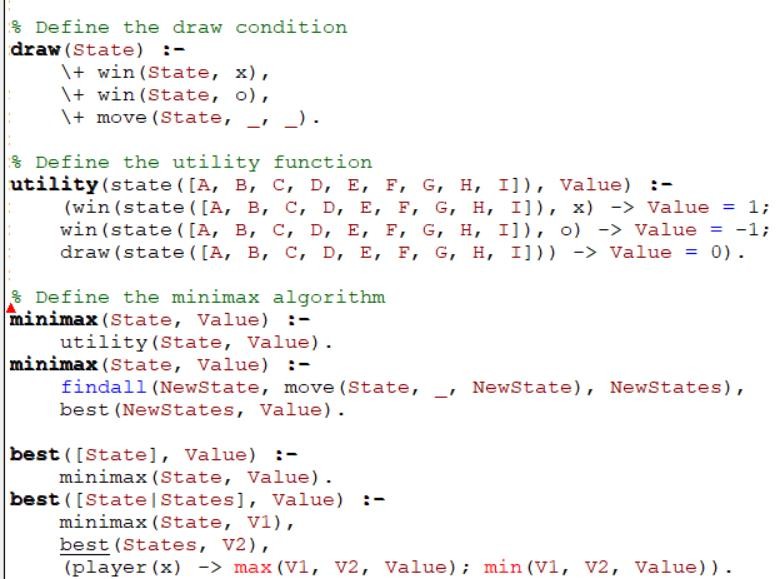
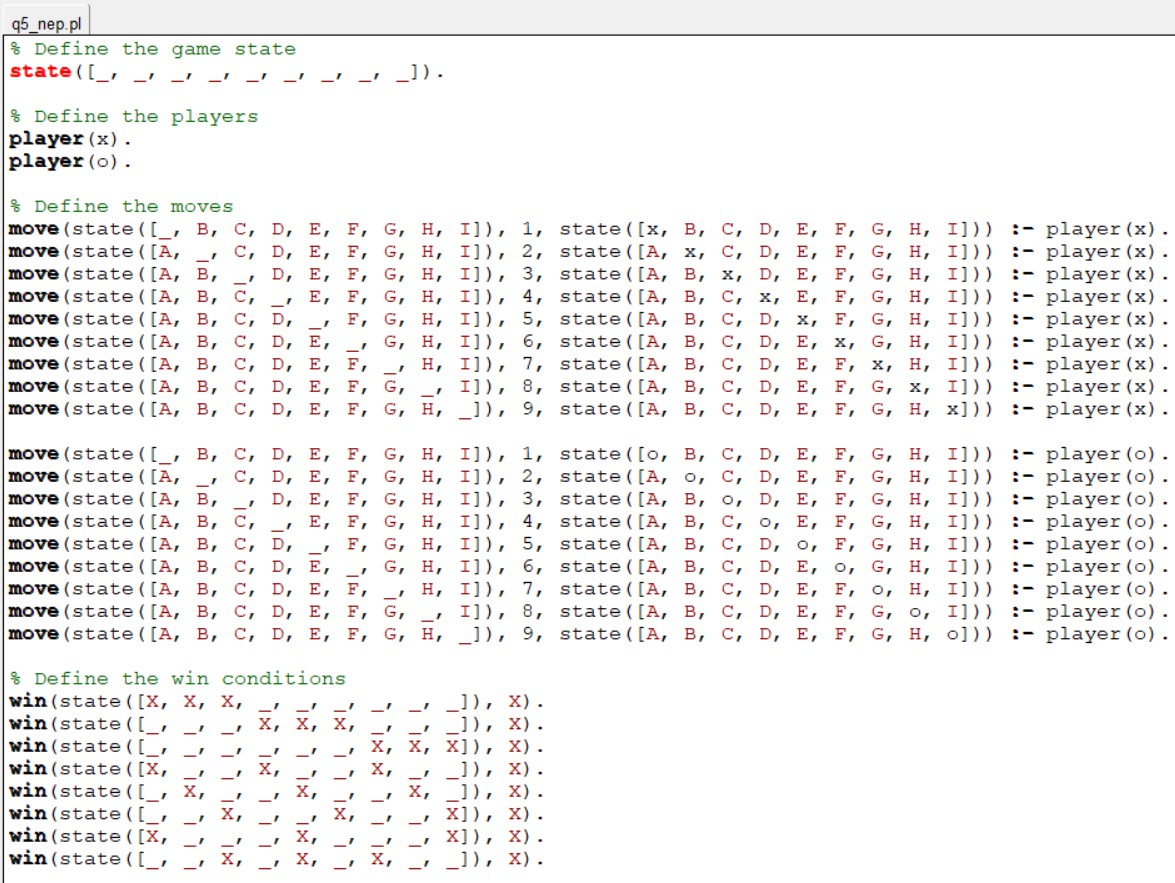
4. Write a program to implement A\* search algorithm in Prolog.

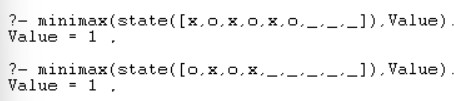
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**Output:**

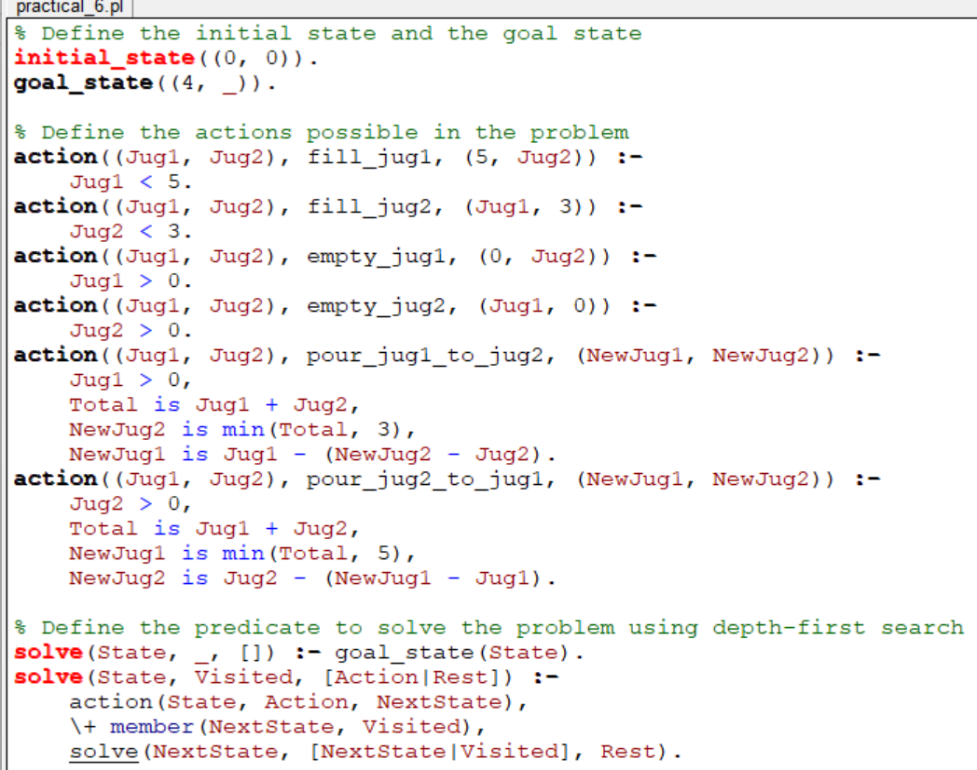
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5. Write a program to implement the min-max search algorithm in Prolog.

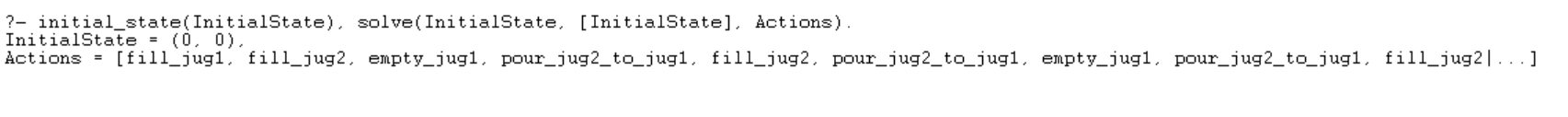


**Output:**

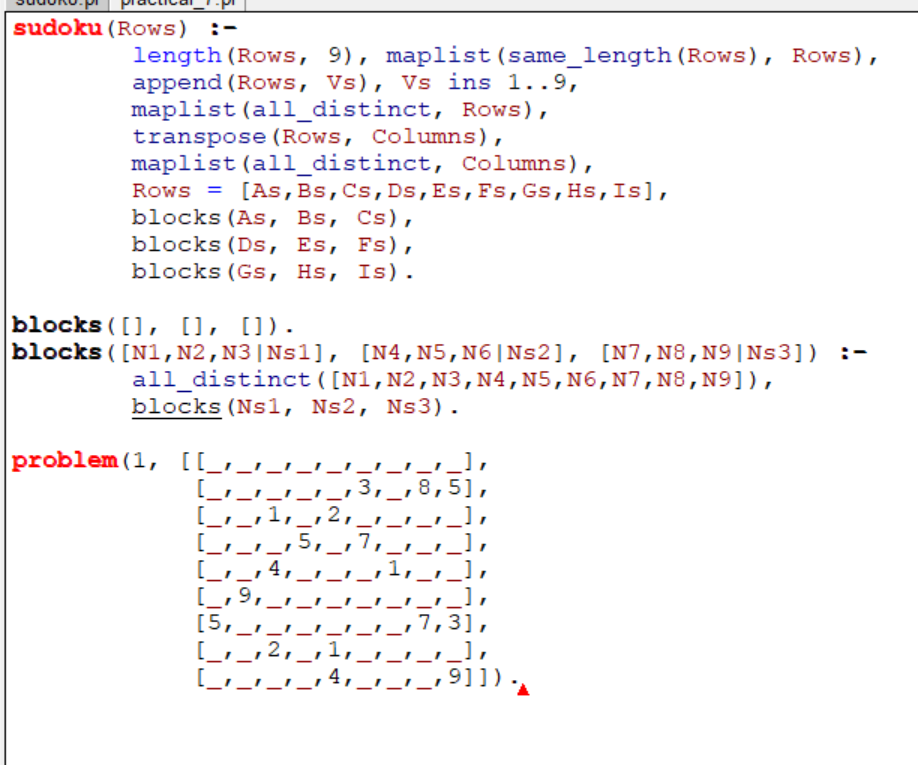
6. Write a program to solve the Water-Jug Problem in Prolog.



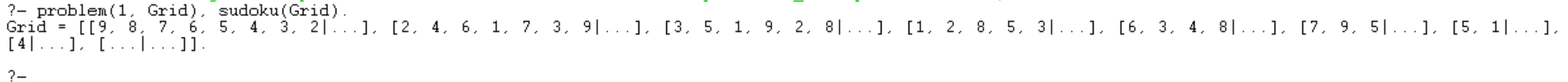
**Output:**



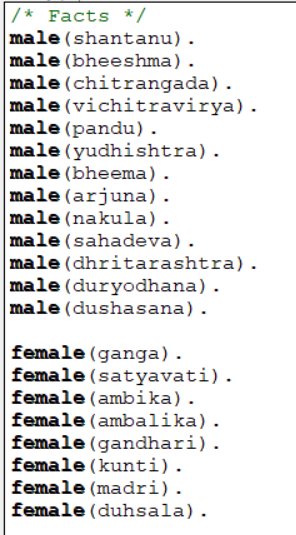
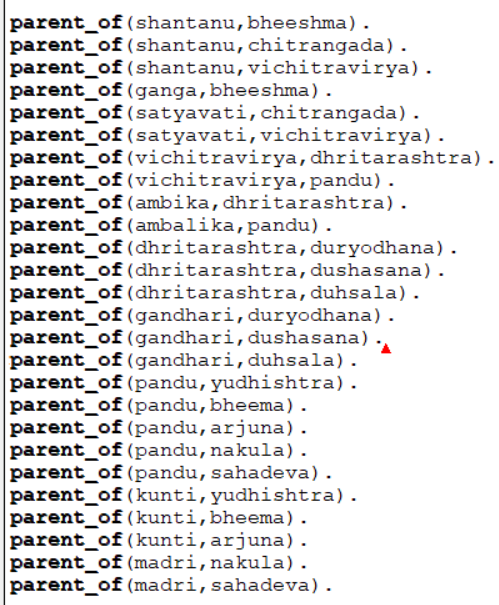
7. Implement sudoku problem (minimum 9X9 size) using constraint satisfaction in Prolog.

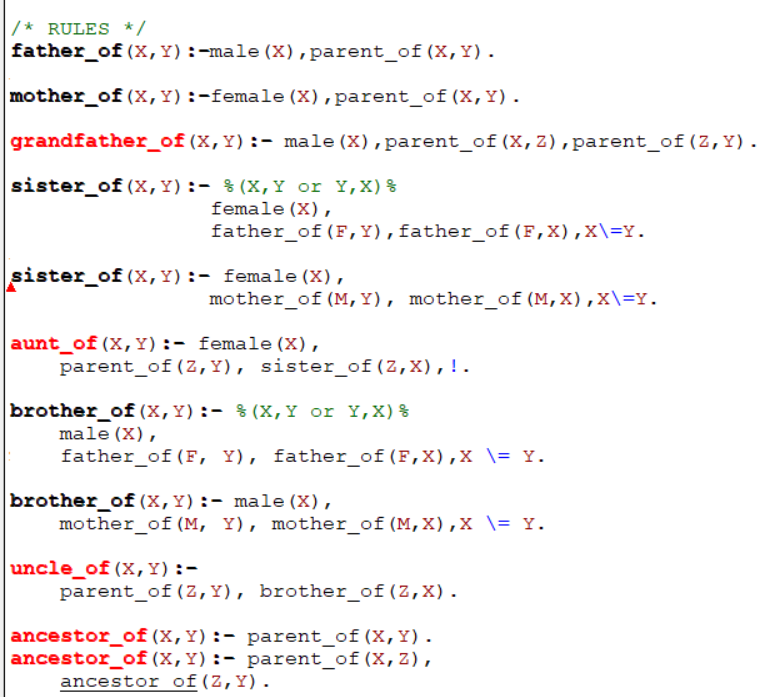
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**Output:**

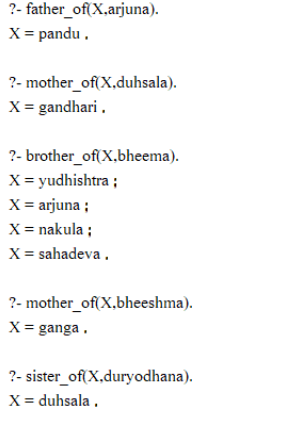
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8. Write a Prolog program to implement the family tree and demonstrate the family relationship.

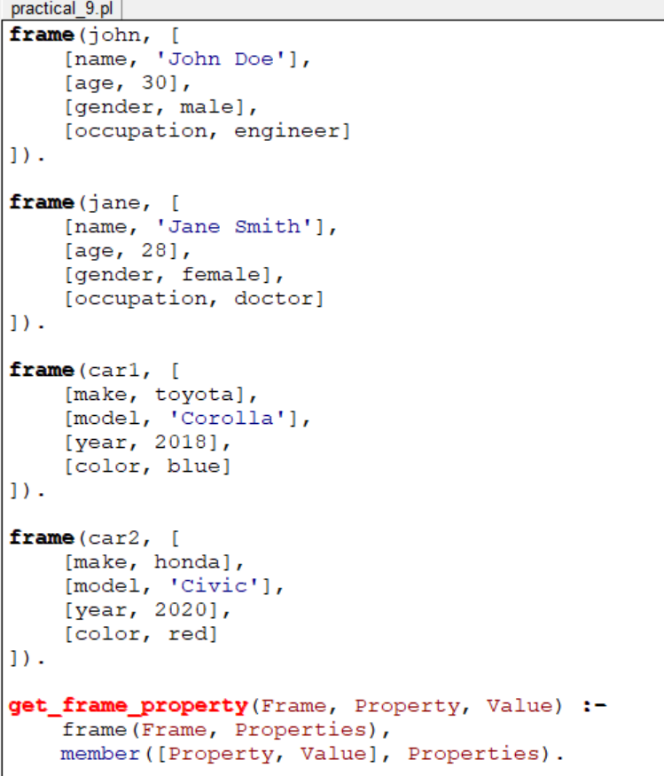
 



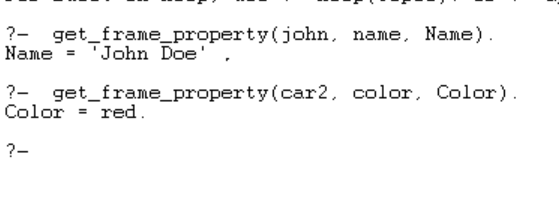
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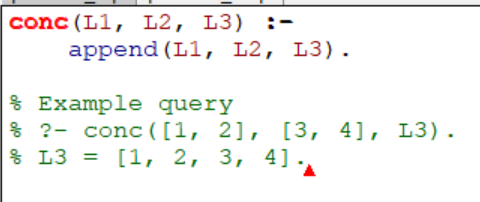
9. Write a Prolog program to implement knowledge representation using frames with appropriate examples.



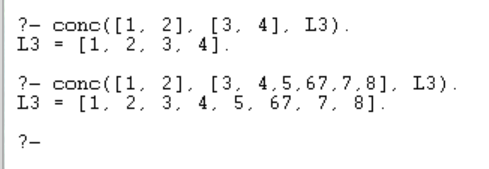
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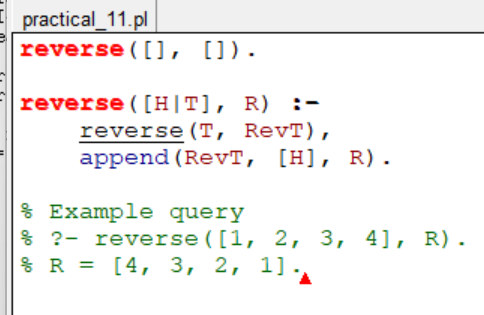
10. Write a Prolog program to implement conc (L1, L2, L3) where appended with L1 to get the resulted list L3.



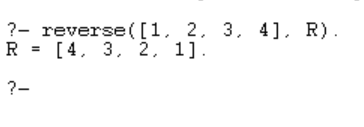
**Output:**



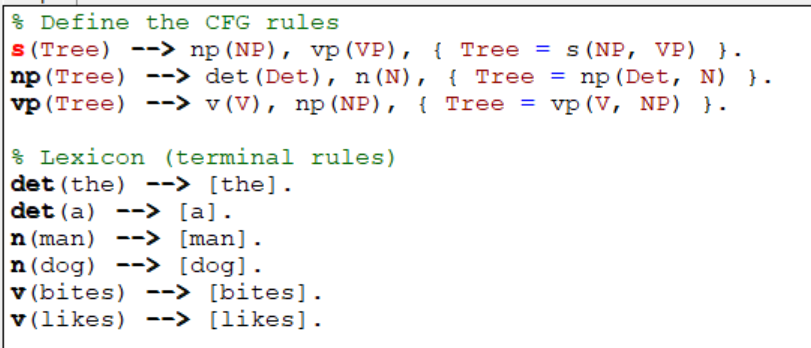
11. Write a Prolog program to implement reverse (L, R) where List L is original and List R is reversed list.



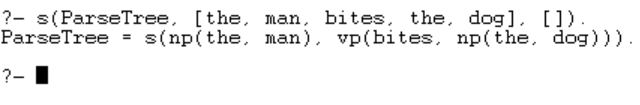
**Output:**



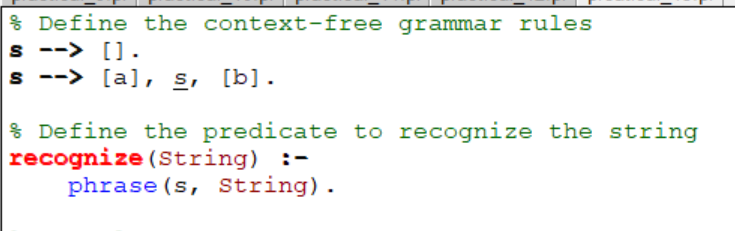
12. Write a Prolog program to generate a parse tree of a given sentence in English language assuming the grammar required for parsing.

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**Output:**

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13. Write a Prolog program to recognize context free grammar a^nb^n.



**Output:**

