Program-(6A)

Aim: write a program to perform given Prolog Examples.

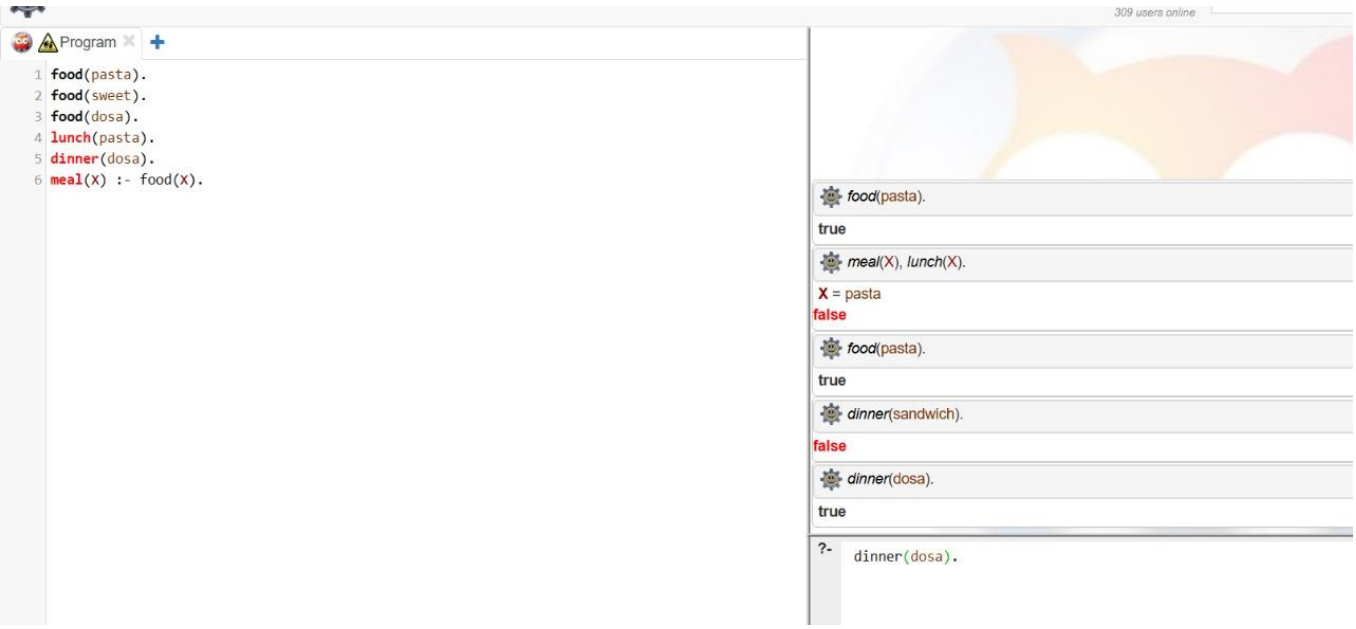
Theory:

Prolog, a declarative programming language, operates on a foundation of logical inference and pattern matching.Facts and Rules: In Prolog, you define facts and rules. Facts represent ground truths, while rules establish relationships or conditions.Queries: Queries drive Prolog's execution. You pose queries to the system, which then attempts to find solutions based on the defined facts and rules.Variables: Prolog uses variables to enable flexible pattern matching and querying. Variables start with an uppercase letter or underscore.

Algorithm:

Initialize Knowledge Base: Start with initializing the knowledge base by adding the facts about who studies which course and who teaches which course.Professor Inference Rule: Define the inference rule professor(X, Y) which states that a person X is a professor if they teach a course Z and a person Y studies that course Z.Querying: Once the knowledge base is set up and the inference rule is defined, you can query the system to find out who is a professor for a given course.Execution: During execution, Prolog will match the query against the defined facts and rules. It will find all instances where the professor(X, Y) rule is satisfied, i.e., where X teaches a course Z and Y studies that same course Z.

Code:



Program-(6B)

Aim: write a program to perform given Prolog Examples.

Theory:

Prolog, a declarative programming language, operates on a foundation of logical inference and pattern matching.Facts and Rules: In Prolog, you define facts and rules. Facts represent ground truths, while rules establish relationships or conditions.Queries: Queries drive Prolog's execution. You pose queries to the system, which then attempts to find solutions based on the defined facts and rules.Variables: Prolog uses variables to enable flexible pattern matching and querying. Variables start with an uppercase letter or underscore.

Algorithm:

Initialize Knowledge Base: Start with initializing the knowledge base by adding the facts about who studies which course and who teaches which course.Professor Inference Rule: Define the inference rule professor(X, Y) which states that a person X is a professor if they teach a course Z and a person Y studies that course Z.Querying: Once the knowledge base is set up and the inference rule is defined, you can query the system to find out who is a professor for a given course.Execution: During execution, Prolog will match the query against the defined facts and rules. It will find all instances where the professor(X, Y) rule is satisfied, i.e., where X teaches a course Z and Y studies that same course Z.

Code: