

Aim : To write simple fact for given statements using PROLOG programming.

Title : Write simple fact for the statements using PROLOG.

Theory : PROLOG as the name itself suggests, is short form of logical programming. It is logical and declarative programming language.

PROLOG language basically has three different elements.

① Facts :-

It is predicate that is true.

Eg. If we say, "Jerry is mouse", then it is a fact.

② Rules :-

They are extensions of facts that contain conditional clauses. To satisfy a rule these conditions should be met.

Eg. If we define rule as

$\text{grandfather}(X, Y) :- \text{father}(X, Z), \text{parent}(Z, Y)$

Above statement implies that for  $X$  to be grandfather of  $Y$ ,  $Z$  should be parent of  $Y$  and  $X$  should be father of  $Z$ .

③ Questions :

And to run a prolog program, we need some questions, and these questions can be answered by the given facts and rules.

A basic programming environment has no literals.  
An identifier with upper case variables and other identifiers denote variables.

Identifiers that start with lower case denote constants.  
The basic Prolog elements are typeless.

The most important implementations of prolog have been enhanced to include integer values, characters and operations.

### Applications :

- Specification language
- Robot planning
- Natural language Understanding
- Machine learning
- Expert System
- Problem solving
- Automated Reasoning, etc.

### Conclusion :-

We have successfully implemented PROLOG code successfully.