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| A picture containing drawing, stop, room  Description automatically generated | Artificial Intelligence  Practical #10 | | |
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| **Subject/Course:** | **Artificial Intelligence** | | |
| **Topic** | **Basics of prolog** | | |
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| **1.** Write a program to derive the predicate. (for e.g.: Sachin is batsman , batsman is cricketer) - > Sachin is Cricketer. | | | |
| **Code in Prolog**  batsman(sachin).  batsman(virat).  cricketer(batsman).  cricketer(Y):-batsman(Y).  **Output in Prolog** | | | |
| **2.** Write a program which contains three predicates: male, female, parent. Make rules for following family relations: father, mother, grandfather, grandmother, brother, sister, uncle, aunt, nephew and niece, cousin.  Question:  i. Draw Family Tree.  ii. Define: Clauses, Facts, Predicates and Rules with conjunction and disjunction | | | |
| **Code in Prolog**  female(pammi).  female(lizza).  female(patty).  female(anny).  male(jimmy).  male(bobby).  male(tomy).  male(pitter).  parent(pammi,bobby).  parent(tomy,bobby).  parent(tomy,lizza).  parent(bobby,anny).  parent(bobby,patty).  parent(patty,jimmy).  parent(bobby,pitter).  parent(pitter,jimmy).  mother(X,Y):- parent(X,Y),female(X).  father(X,Y):- parent(X,Y),male(X).  haschild(X):- parent(X,\_).  sister(X,Y):- parent(Z,X),parent(Z,Y),female(X),X\==Y.  brother(X,Y):-parent(Z,X),parent(Z,Y),male(X),X\==Y.  **Output in Prolog**      ii. Define: Clauses, Facts, Predicates and Rules with conjunction and disjunction  • Clauses: - A clause in Prolog is a unit ofinformation in a Prolog program ending with a full stop (“. “)    • Facts: - A fact is a Prolog clause with a headwith no variables in it, and no body.    • Predicates: - A predicates denote a property orrelationship between objects. A method to contain the Argument and return theBoolean values such as false or true.    • Conjunction: - It can be implemented using thecomma (,) operators. So, two predicates separated by Comma are joined withAND statement.    • Disjunction: - It can be implemented using thesemi-colon (;) operators. So, two predicates separated by Semi-colon arejoined with OR statement. | | | |
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