Group id: 1801cs08_1801cs11_1801cs53

Group Members:
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Subject: Artificial Intelligence Lab 5
Date: 27/10/2021

1. Given an expression, write a program to decide whether it's a theorem or not.

Filename: lab5_q2.py

Test case1: (P=>Q)=>((~Q=>P)=>Q) = theorum
Test Case2: P=>(PvQ) = theorum
Test Case3: (P^Q)=>(PvR) = theorum

2. Write a program in Prolog to represent the following knowledge and find the answer to the given questions

Filename: q2.pl

```
sumit@sumit-X510UNR:~$ cd Desktop
sumit@sumit-X510UNR:~/Desktop$ prolog
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- consult('q2').
Warning: /home/sumit/Desktop/q2.pl:5:
        Singleton variables: [X]
Warning: /home/sumit/Desktop/q2.pl:10:
        Singleton variables: [X]
Warning: /home/sumit/Desktop/q2.pl:12:
        Singleton variables: [X]
Warning: /home/sumit/Desktop/q2.pl:15:
        Singleton variables: [X]
Warning: /home/sumit/Desktop/q2.pl:17:
        Singleton variables: [P,Q]
true.

?- g(X).
X = b.

?-
```

B is the member who is a mountain climber but not a skier