INSTITUTE OF ENGINEERING
KATHMANDU ENGINEERING COLLEGE
KALIMATI, KATHMANDU
(AFFILIATED TO T.U.)

Lab Report On:
Artificial Intelligence

Lab No. :02

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Year **:**III Year / II Part

Submitted to:
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LAB 2

SOURCE CODE:

Program 1:

```
weather(kathmandu,summer,warm).

weather(nepalgunj,summer,hot).

weather(mteverest,summer,cold).

warmer_than(C1,C2):-

    weather(C1,summer,hot),

    weather(C2,summer,warm),

    write(C1),

    write(' is warmer than '),

    write(C2).

colder_than(C1,C2):-

    weather(C1,summer,cold),

    weather(C2,summer,warm),

    write(C1),

    write(' is colder than '),

    write(C2).
```

Program 2:

```
course(

subject(ai),

day(mon,thurs),

time(11,1),

lecturer(sujan),
```

```
complexity(mid),
sixth
).
course(
subject(instru2),
day(mon,thurs),
time(11,1),
lecturer(surendra),
complexity(easy),
fifth
).
course(
subject(probability),
day(mon,thurs),
time(11,1),
lecturer(chasma_laune_sir),
complexity(easy),
fifth
).
course(
subject(economics),
day(mon,fri),
time(12,2),
lecturer(nimesh),
complexity(hard),
```

sixth

).

lecturer(S,L):-

course(

subject(S),

_,

_,

lecturer(L),

_,

_

).

Program 3:

weather(kath,90).

weather(pok,85).

temp_cel(C1,Temp_f):-

   weather(C1,Temp_f),

   (Temp is (Temp_f-32)*5/9),

   write(Temp_f),

   write(' is '),

   write(Temp).

Program 4:

select(X):-

   member(X,[1,2,3,4,5,6,9]),

   Y is X*X,

```prolog
    Y =< 50,

    write(X),

    write(' ^ 2 = '),

    write(Y).
```

Program 5:

```prolog
money(F,T,H,Fi):-

        member(F,[0,1,2]),

        member(T,[0,1,2,3,4]),

        member(H,[0,1,2,3,4,5,6,7,8,9,19]),

        member(Fi,[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20]),

        Z is (F*500)+(T*250)+(H*100)+(Fi*50),

        Z=<1000,

        R=1000-Z,

        write(Z),

        write(R).
```

OUTPUT:

```
?- lecturer(instru2,S).
S = surendra .
```

```
?- select(5).
5 ^2= 25
true
```

```
?- warmer_than(kathmandu,nepalgunj).
false.

?- warmer_than(nepalgunj,kathmandu).
nepalgunjis warmer thankathmandu
true.
```

```
?- temp_cel(kath,90).
90 is 32.2222222222222
true.
```

```
?
```

CONCLUSION:

Hence in this lab we learned about propositional logic implementation in PROLOG.