No: _____

DATE: ___ / ___

a) ?- ski(J).

J=J J=J J=J

?- weekend(J), weather(J,W), W \= rain.

| J = saturday

?- weather(saturday, W), W \= rain

/ W = rain

?- rain \= rain.

†

J = sunday

?- weather(sunday, W),

W \= rain.

| W = cold

?- cold \= rain.

|

□

② ?- holiday(J), weather(J, snow).

/ J = friday.

?- weather(friday, snow).

|

□

③ ?- weekday(J), weather(J, sunny), \+ nicedayoff(J)

J = monday J = tuesday J = wednesday | J = thursday | J = friday

⑥ ⑦ ⑩ ⑪

?- weather(monday, sunny), \+ nicedayoff(monday).

|

?- \+ nicedayoff(monday).

|

④ ⑤

* 4 and 5 are F

→ \+ F ⇒ T.

|

□

No: _____

DATE: ____ / ____

④ ?- weekend (monday), weather (monday, sunny).

†

⑤ ?- holiday (monday), weather (monday, sunny).

†

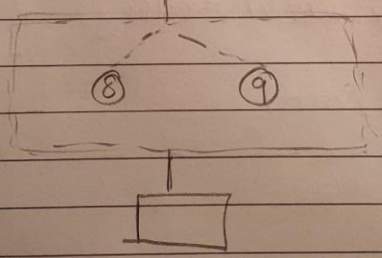
⑥ ?- weather (tuesday, sunny), \+ nicedayoff (tuesday).

†

⑦

?- weather (wednesday, sunny), \+ nicedayoff (wednesday).

?- \+ nicedayoff (wednesday).



* 8 and 9 Fail
=> \+ nicedayoff
= T

⑧ ?- weekend (wednesday), weather (wednesday, sunny).

†

⑨ ?- holiday (wednesday), weather (wednesday, sunny).

†

⑩ ?- weather (thursday, sunny), \+ nicedayoff (thursday).

†

DATE: ___/___

(11).

?- weather(friday, sunny), \+ nicedayoff(friday).

†

OUTPUT:

?- ski(J).
J = sunday ? ;
J = friday ? ;
J = monday ? ;
J = wednesday.

b. ?- ski(J).

?- weekend(J), weather(J, W), W \= rain

/ J = saturday

?- weather(saturday, W), W \= rain

| W = rain

?- rain \= rain.

†.

① J = sunday ②

?- weather(sunday, W), W \= rain

| W = cold

?- cold \= rain

|

□

① . ?- holiday(J), weather(J, snow).

| J = friday.

?- weather(friday, snow).

|

□

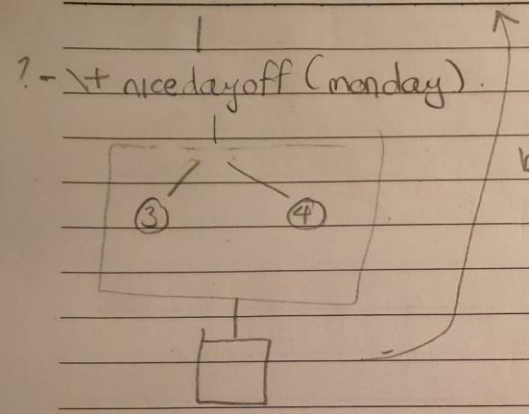
② ?- weekday(J), weather(J, sunny), \+ nicedayoff(J

/ J = monday. !

?- weather(monday, sunny), \+ nicedayoff(monday).

No: _____

DATE: ____ / ____



③ ?- weekend(monday), weather(monday, sunny).

+

④ ?- holiday(monday), weather(monday, sunny).

+

Output :

```
?- ski(J).
J = sunday ? ;
J = friday ? ;
J = monday.
```

c.

The backtracking after executing the second ski(J) will be stop. The first ski(J) will run normally and give output sunday. Prolog will then backtracking and run second ski(J) and give output friday. Prolog will backtrack but this process is stopped because of the cut operator in the second ski(J). Therefore, the output of ?- ski(J) is:

```
?- ski(J).
J = Sunday;
J = friday.
```