Assignment 4 Test Cases

Weather facts:

weather(apr,8,calm,dry,warm).  
weather(mar,12,calm,dry,cool).  
weather(may,6,wind,dry,warm).  
weather(dec,9,wind,snow,cold).  
weather(aug,15,wind,cool,dry).  
weather(aug,21,calm,cold,snow).  
weather(jan,20,calm,hot,dry).  
weather(jan,23,wind,hot,rain).

weather(jan,12,wind,cold,dry).

weather(feb,28,cold,wind,rain).

weather(jun,3,cold,wind,snow).

weather(mar,14,cool,wind,snow).

weather(oct,29,cold,wind,rain).

weather(jun,21,cold,wind,rain).

weather(jun,25,snow,wind,cool).

weather(apr, 3, wind, warm, rain).

weather(apr, 4, dry, calm, warm).

weather(apr, 20, cool, rain, wind).

weather(apr, 24, wind, snow, cold).

weather(apr, 27, dry, calm, cool).

weather(jul, 18, hot, rain, calm).

weather(jul, 20, hot, dry, calm).

weather(sep, 15, calm, dry, cool).

weather(sep, 16, rain, hot, calm).

weather(sep, 18, warm, rain, calm).

weather(oct, 29, cool, dry, calm).

weather(nov, 1, cold, snow, wind).

weather(nov, 5, hot, snow, wind).

weather(dec, 15, warm, rain, wind).

weather(dec, 21, wind, cold, dry).

weather(dec,22,wind,hot,dry).

weather(dec,12,wind,hot,dry).

weather(jul,23,cold,dry,calm).

wet(M,D):

M = sep,

D = 16 ;

M = apr,

D = 20 ;

M = jul,

D = 18 ;

M = sep,

D = 18 ;

M = dec,

D = 15 ;

M = jan,

D = 23 ;

M = feb,

D = 28 ;

M = oct,

D = 29 ;

M = jun,

D = 21 ;

M = apr,

D = 3 ;

M = jun,

D = 25 ;

M = dec,

D = 9 ;

M = apr,

D = 24 ;

M = nov,

D = 1 ;

M = nov,

D = 5 ;

M = aug,

D = 21 ;

M = jun,

D = 3 ;

M = mar,

D = 14.

?- wet(feb,D).

D = 28 ;

false.

?- wet(apr,D).

D = 20 ;

D = 3 ;

D = 24 ;

false.

?- wet(M,21).

M = jun ;

M = aug ;

false.

?- tropical(M,D).

M = jul,

D = 18 ;

M = jan,

D = 23 ;

M = sep,

D = 16 ;

false.

?- tropical(jan,D).  
D = 23 ;  
false.

?- impossible(M,2).  
false.

?- impossible(M,D).

M = nov,

D = 5 ;

False.

mixed(M).

M = jul ;

M = jul ;

M = nov ;

M = jan ;

M = jan ;

M = dec ;

M = dec ;

M = dec ;

M = dec ;

false.

mixed(feb).

false.

?- summer(jan).

false.

?- summer(jun).

true .

?- summer(jul).

true .

?- winter(jun).

false.

?- winter(aug).

false.

?- winter(mar).

true.

?- winter(may).

false.

?- winter(M).

M = jan ;

M = feb ;

M = mar.

?- match(Month,21,rain).

Month = jun ;

false.

?- match(M,D,snow).

M = jun,

D = 25 ;

M = dec,

D = 9 ;

M = apr,

D = 24 ;

M = nov,

D = 1 ;

M = nov,

D = 5 ;

M = aug,

D = 21 ;

M = jun,

D = 3 ;

M = mar,

D = 14.

?- match(apr,8,dry).

true .

?- unseasonable(M,12).  
false.

?- unseasonable(M,23).

M = jan ;

M = jul ;

false.

?- unseasonable(M,D).

M = jan,

D = 20 ;

M = jan,

D = 23 ;

M = jun,

D = 3 ;

M = jun,

D = 21 ;

M = jun,

D = 25 ;

M = jul,

D = 23 ;

M = aug,

D = 21 ;

M = aug,

D = 15 ;

false.