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get_input(Prompt, Value) :-
    write(Prompt),
    read(Value).

classify_water_source(LakeDistance, RiverDistance, RainfallIntensity,
SandyAquifier, BeachDistance, WaterSource) :-
    % Define rules for determining the water source based on distances
    (   LakeDistance < 10 ->
        WaterSource = 'Lake'
    ;   LakeDistance >= 10, RiverDistance < 8, RainfallIntensity < 200 ->
        WaterSource = 'River'
    ;   LakeDistance >= 10, RiverDistance < 8, RainfallIntensity >= 200 ->
        WaterSource = 'Rain'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity >= 150 ->
        WaterSource = 'Rain'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity < 150,
SandyAquifier = false, LakeDistance >= 14 ->
        WaterSource = 'Rain'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity < 150,
SandyAquifier = false, LakeDistance < 14 ->
        WaterSource = 'Lake'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity < 150,
SandyAquifier = true, BeachDistance >= 5 ->
        WaterSource = 'Ground Water'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity < 150,
SandyAquifier = true, BeachDistance < 5, RiverDistance >= 20 ->
        WaterSource = 'Rain'
    ;   LakeDistance >= 10, RiverDistance >= 8, RainfallIntensity < 150,
SandyAquifier = true, BeachDistance < 5, RiverDistance < 20 ->
        WaterSource = 'River'
    ;   % If none of the conditions match, return "unknown"
        WaterSource = 'Unknown'
    ).

main :-
    get_input('Enter Lake Distance(In km): ', LakeDistance),
    get_input('Enter River Distance:(In km) ', RiverDistance),
    get_input('Enter Rainfall Intensity:(In mm) ', RainfallIntensity),
    get_input('Enter Is Sandy Aquifer (true/false)?: ', SandyAquifier),
    get_input('Enter Beach Distance(In km): ', BeachDistance),
    classify_water_source(LakeDistance, RiverDistance, RainfallIntensity,
SandyAquifier, BeachDistance, WaterSource),
    write('\nWater Source: '), writeln(WaterSource), write('\n').

:- main.

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