**Activity 3**:

**CODE**:

:- dynamic precipitation/0, snowing/0, raining/0, freezing/0.

precipitation :- raining.

precipitation :- snowing.

raining :- \+ freezing, precipitation.

snowing :- freezing, precipitation.

snowing.

Text

Description automatically generated

**Rearranged:**

:- dynamic precipitation/0, raining/0, snowing/0, freezing/0.

precipitation :- snowing.

precipitation :- raining.

snowing.

snowing :- freezing, precipitation.

raining :- \+ freezing, precipitation.

freezing :- snowing.

Text

Description automatically generated

**Activity 4**:

**CODE:**

mammal(horse).

mammal(X) :- legs(X,4),arms(X,0).

mammal(X) :- legs(X,2),arms(X,2).

legs(X,2) :- mammal(X),arms(X,2).

legs(X,4) :- mammal(X),arms(X,0).

arms(horse,0).

Graphical user interface, text, application, email

Description automatically generated

**Activity 5:**

**CODE:**

parent(jill,bill).

parent(sarah, bill).

parent(sam,jill).

parent(ana,jill).

parent(jan,sarah).

parent(smith,sarah).

grandparent(X,Y) :- parent(X,Z) , parent(Z,Y).

sibling(X,Y) :- parent(X,Z), parent(Y,Z), not(X = Y).

cousin(X,Y) :- grandparent(X,Z) , grandparent(Y,Z), not(X = Y).

Graphical user interface, text, application

Description automatically generated

**Activity 6:**

**CODE:**

gcd(X, Y, G) :- X = Y, G = X.

gcd(X, Y, G) :-

X < Y,

Y1 is Y - X,

gcd(X, Y1, G).

gcd(X, Y, G) :- X > Y, gcd(Y, X, G).

Graphical user interface, text, application, email

Description automatically generated

**Activity 7:**

**CODE:**

last([X]):-

write("\nLast element is : "),

write(X).

last([Y|Tail]):-

last(Tail).

Text

Description automatically generated