PROGRAM 1: PROLOG PROGRAM FOR COLLEGE KNOWLEDGE

```
class(fy,it).

class(sy,it).

class(ty,it).

college(rscoe).

city(rscoe,pune).

state(rscoe,mh).

branch(it,rscoe).

branch(cs,rscoe).

branch(etc,rscoe).

branch(civil,rscoe).

branch(mech,rscoe).

subject(fy,cpp).

subject(sy, ds).

subject(ty, al).

location(X,Y):-city(C,X), state(C,Y).

learns(X,Y):- class(C,X), subject(C,Y).
```

PROGRAM 2: PROLOG PROGRAM FOR RELATIONS KNOWLEDGE

```
parent(x,y).

parent(z,x).

child(X,Y):-parent(Y,X).

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

friend(p,y).

friend(X,Y):-friend(Y,X).

likes(p,sing).

likes(y,cricket).

classmates(p,y).

classmates(X,Y):-classmates(Y,X).
```

PROGRAM 3: PROLOG PROGRAM FOR TEACHER STUDENT KNOWLEDGE

```
parent(x,y).

parent(z,x).

child(X,Y):-parent(Y,X).

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

friend(p,y).

friend(X,Y):-friend(Y,X).

likes(p,sing).

likes(y,cricket).

classmates(p,y).

classmates(X,Y):-classmates(Y,X).
```

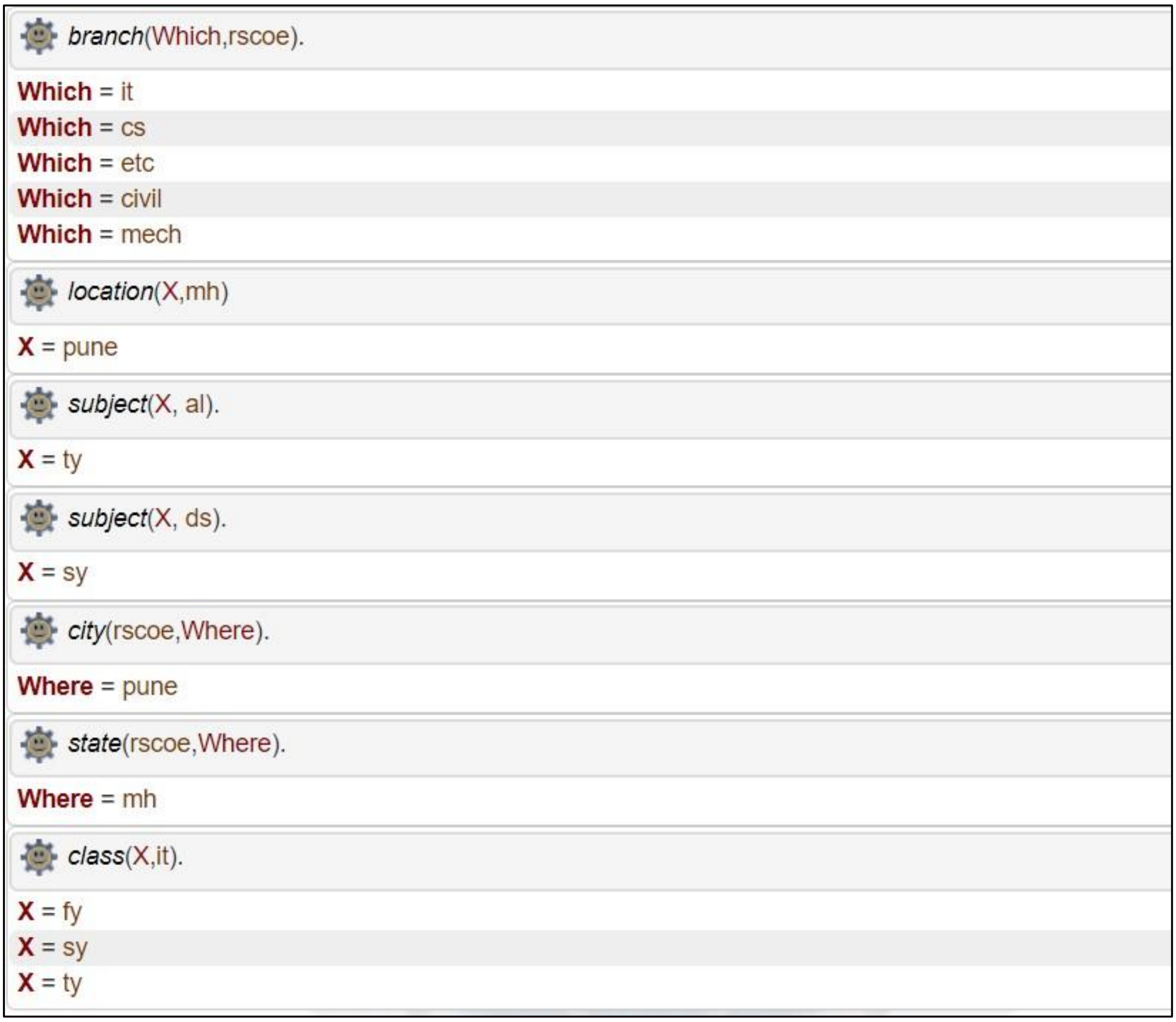
PROGRAM 4: PROLOG PROGRAM FOR MIN MAX

```
find_max(X,Y,X):-X>Y , ! .

find_max(X,Y,Y):-Y>X.



find_min(X,Y,X):-X<Y,!.

find_min(X,Y,Y):-Y<X.
```

PROGRAM 5: PROLOG PROGRAM FOR MIN MAX

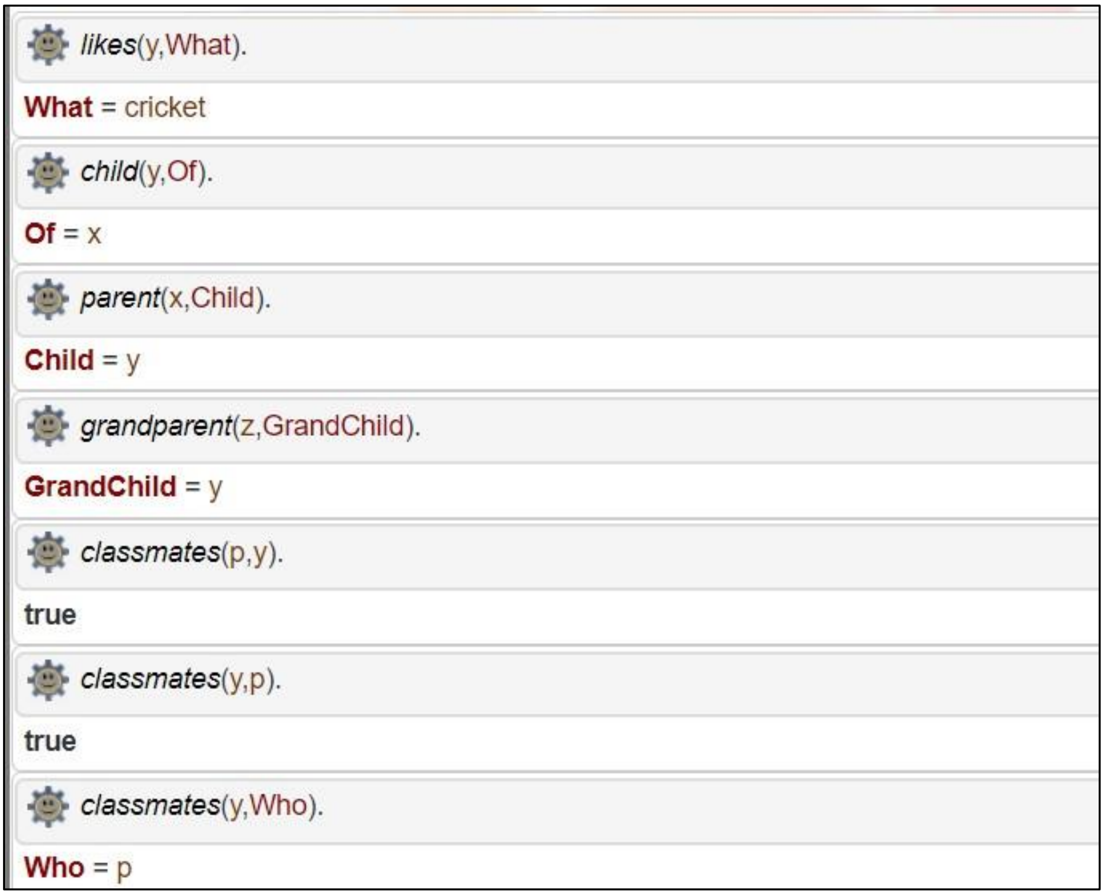
```
bike(ktm).

bike(bike1).

bike(bike2).

bike(bike3).


location(bike1,city1).

location(bike1,city2).

location(bike2,city2).

location(bike3,city3).


category(bike1,electric).

category(bike2,petrol).

category(bike3,pertol).


price(bike1,80000).

price(bike2,70000).

price(bike3,60000).


find_max(A,B,A):-price(A,X),price(B,Y),X>=Y, ! .

find_max(A,B,B):-price(A,X),price(B,Y),Y>X.


find_min(A,B,A):-price(A,X),price(B,Y),X<Y, ! .

find_min(A,B,B):-price(A,X),price(B,Y),Y<X.
```

QUERIES FOR PROGRAM 1



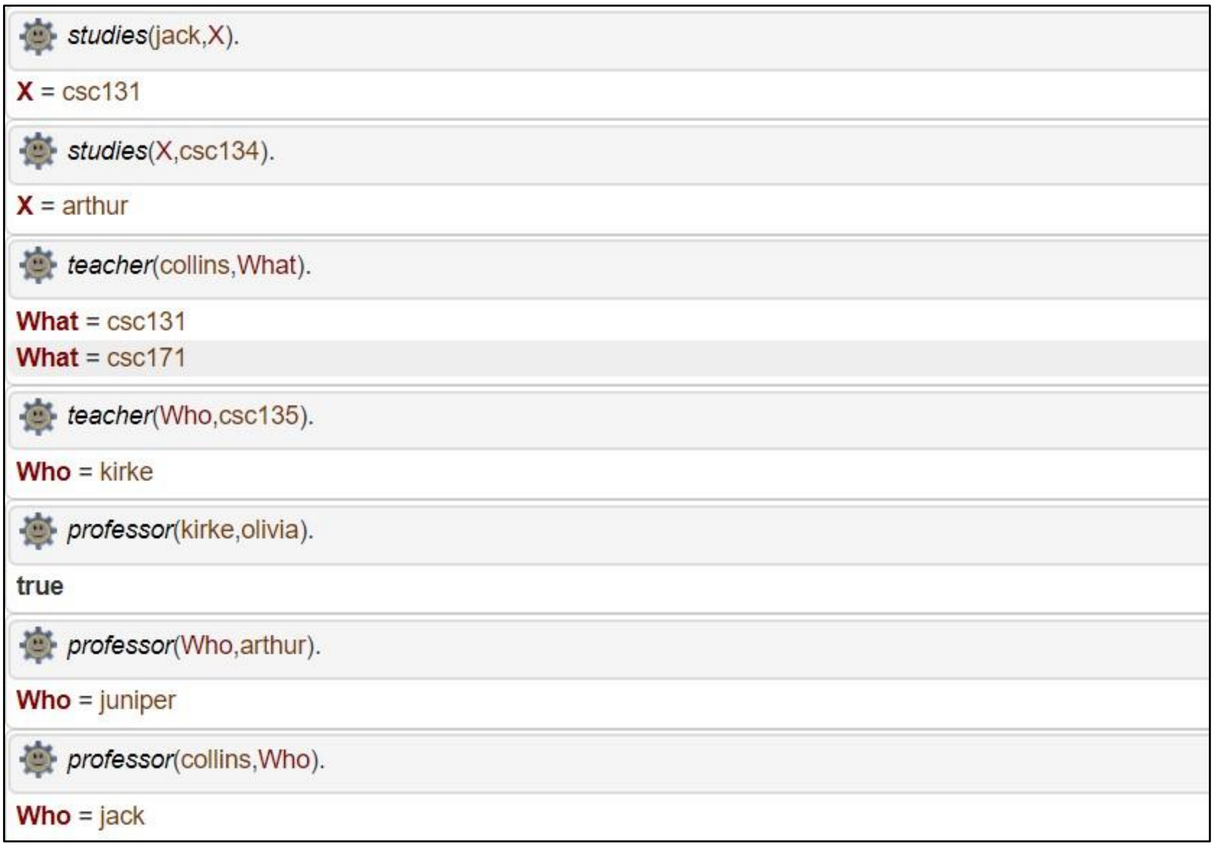
```
branch(Which,rscoe).
Which = it
Which = cs
Which = etc
Which = civil
Which = mech

location(X,mh)
X = pune

subject(X, al).
X = ty

subject(X, ds).
X = sy

city(rscoe,Where).
Where = pune

state(rscoe,Where).
Where = mh

class(X,it).
X = fy
X = sy
X = ty
```

QUERIES FOR PROGRAM 2



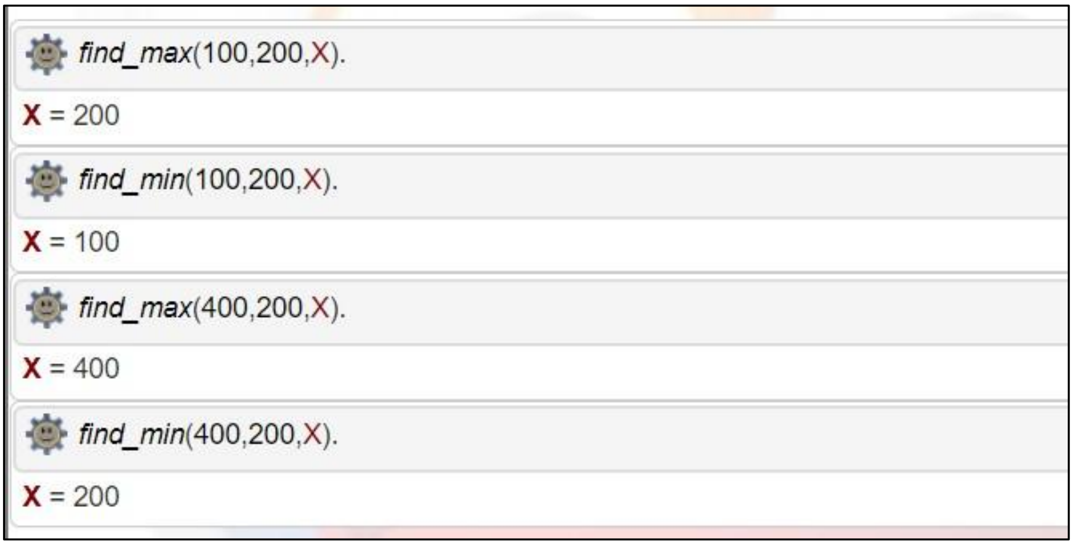
```
likes(y,What).
What = cricket
child(y,Of).
Of = x
parent(x,Child).
Child = y
grandparent(z,GrandChild).
GrandChild = y
classmates(p,y).
true
classmates(y,p).
true
classmates(y,Who).
Who = p
```

QUERIES FOR PROGRAM 3



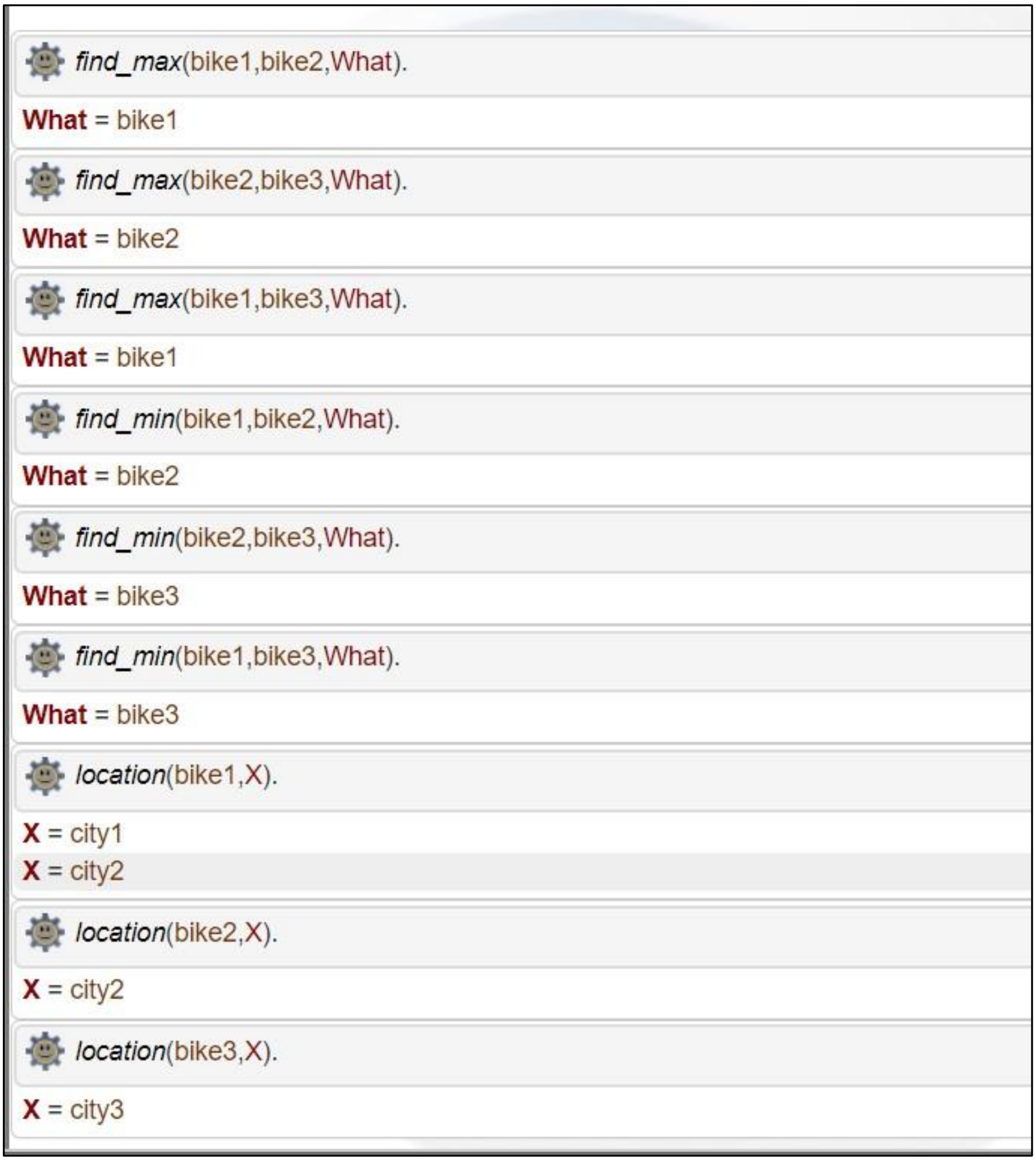
```
studies(jack,X).
X = csc131
studies(X,csc134).
X = arthur
teacher(collins,What).
What = csc131
What = csc171
teacher(Who,csc135).
Who = kirke
professor(kirke,olivia).
true
professor(Who,arthur).
Who = juniper
professor(collins,Who).
Who = jack
```

QUERIES FOR PROGRAM 4



```
find_max(100,200,X).
X = 200
find_min(100,200,X).
X = 100
find_max(400,200,X).
X = 400
find_min(400,200,X).
X = 200
```

QUERIES FOR PROGRAM 5



```
find_max(bike1,bike2,What).
What = bike1
find_max(bike2,bike3,What).
What = bike2
find_max(bike1,bike3,What).
What = bike1
find_min(bike1,bike2,What).
What = bike2
find_min(bike2,bike3,What).
What = bike3
find_min(bike1,bike3,What).
What = bike3
location(bike1,X).
X = city1
X = city2
location(bike2,X).
X = city2
location(bike3,X).
X = city3
```