```
prof(adam).
student(brian).
student(michael).
publish(adam,michael).
Adcom(adam,michael)
Adcom(adam,brian)
?Advise(X,Y):-prof(X),student(Y),publish(X,Y)
?Adcom(X,Y):-prof(X),student(Y).
?publish(X,Y):-Advise(X,Y)
trace=1

?Advise(adam,brian)?
```

```
search ?Advise(adam,brian)
stack  Goal 1 rule=got(goal) :- ?Advise(adam,brian) inx=0 env={}
 pop Goal 1 rule=got(goal) :- ?Advise(adam,brian) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=0 env={'Y': 'brian', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=0 env={'Y': 'brian', 'X': 'adam'}
stack Goal 3 rule=prof(adam) inx=0 env={}
 pop Goal 3 rule=prof(adam) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=1 env={'Y': 'brian', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=1 env={'Y': 'brian', 'X': 'adam'}
stack Goal 4 rule=student(brian) inx=0 env={}
 pop Goal 4 rule=student(brian) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=2 env={'Y': 'brian', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=2 env={'Y': 'brian', 'X': 'adam'}
```

```
prof(adam).
student(brian).
student(michael).
publish(adam,michael).
Adcom(adam,michael)
Adcom(adam,brian)
?Advise(X,Y):-prof(X),student(Y),publish(X,Y)
?Adcom(X,Y):-prof(X),student(Y).
?publish(X,Y):-Advise(X,Y)
#trace=1
?Advise(adam,Q)?

```

```
{'Q': 'michael'}
Yes there is a solution
?
```

```
prof(adam).
student(brian).
student(michael).
publish(adam,michael).
Adcom(adam,michael)
Adcom(adam,brian)
?Advise(X,Y):-prof(X),student(Y),publish(X,Y)
?Adcom(X,Y):-prof(X),student(Y).
?publish(X,Y):-Advise(X,Y)
#trace=1

?Advise(adam,michael)?

```

```
udrani@rudrani-pc:~$ python prolog1.py file2.txt
search ?Advise(adam,michael)
stack  Goal 1 rule=got(goal) :- ?Advise(adam,michael) inx=0 env={}
 pop Goal 1 rule=got(goal) :- ?Advise(adam,michael) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=0 env={'Y': 'michael', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=0 env={'Y': 'michael', 'X': 'adam'}
stack Goal 3 rule=prof(adam) inx=0 env={}
 pop Goal 3 rule=prof(adam) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=1 env={'Y': 'michael', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=1 env={'Y': 'michael', 'X': 'adam'}
stack Goal 5 rule=student(michael) inx=0 env={}
 pop Goal 5 rule=student(michael) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=2 env={'Y': 'michael', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=2 env={'Y': 'michael', 'X': 'adam'}
stack Goal 6 rule=publish(adam,michael) inx=0 env={}
 pop Goal 6 rule=publish(adam,michael) inx=0 env={}
stack Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=3 env={'Y': 'michael', 'X': 'adam'}
 pop Goal 2 rule=?Advise(X,Y) :- prof(X),student(Y),publish(X,Y) inx=3 env={'Y': 'michael', 'X': 'adam'}
stack Goal 1 rule=got(goal) :- ?Advise(adam,michael) inx=1 env={}
 pop Goal 1 rule=got(goal) :- ?Advise(adam,michael) inx=1 env={}
Yes there is a solution
```