

Logic Programming

Exercise

Represent the following as facts or rules:

a) john is a person

```
person(john) .
```

peter and mary are persons

```
person(peter) .
```

```
person(mary) .
```

fhnw is a university

```
university(fhnw) .
```

john is matriculated at fhnw

```
matriculated(john, fhnw) .
```

A student is a person who is matriculated at a university.

```
student(X) :- person(X), matriculated(X, Y), university(Y) .
```

Is john a student?

```
?- student(john) .
```

```
True
```

Is peter a student?

```
?- student(peter) .
```

```
False
```

b) knut is a person

```
person(knut) .
```

«KEBI» is a class

```
class(kebi) .
```

classes are taught by teachers

```
teacher(X) :- areTaught(Y,X), class(Y) .
```

john attends to class «KEBI»

```
attend(john,kebi) .
```

students are attending to classes

```
student(X) :- class(Y), attend(X,Y) .
```

Is John a student?

```
?- student(john) .  
True
```

knut teaches «KEBI»

```
teach(knut,kebi) .
```

Is knut a teacher?

```
?- teacher(knut) .  
False
```

But with:

```
areTaught(X,Y) :- teach(Y,X) .
```

```
?- teacher(knut) .  
True .
```

