



# A Method for Re-engineering Non-Ontological Resources for Building Ontologies

## Hands-on Exercise

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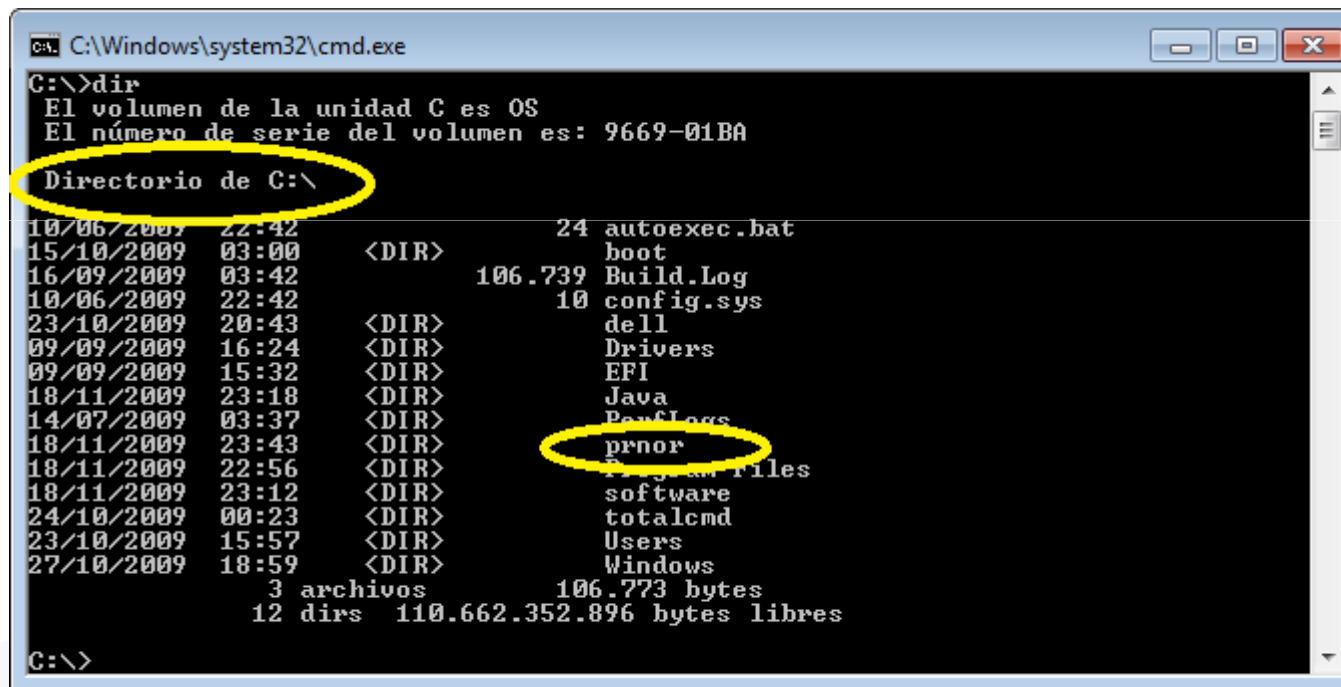
- We selected a thesaurus of a given domain implemented in an XML file.
- Student groups build a conceptual model, of the given domain, from scratch.
- Student groups build other ontology using the PR-NOR software library.
- Student groups compare the time, effort and quality of the resultant ontologies.
- Student groups fill in a questionnaire about the time, effort and quality of the resultant ontologies.

- We selected a classification scheme of a given domain implemented in a database.
- Student groups build a conceptual model, of the given domain, from scratch.
- Student groups build other ontology using the PR-NOR software library.
- Student groups compare the time, effort and quality of the resultant ontologies.
- Student groups fill in a questionnaire about the time, effort and quality of the resultant ontologies.

- Install JDK in the root directory

```
C:\Windows\system32\cmd.exe
C:\>dir
El volumen de la unidad C es OS
El número de serie del volumen es: 9669-01BA
Directorio de C:\
10/06/2009  22:42                24 autoexec.bat
15/10/2009  03:00             <DIR>          boot
16/09/2009  03:42          106.739 Build.Log
10/06/2009  22:42                10 config.sys
23/10/2009  20:43             <DIR>          dell
09/09/2009  16:24             <DIR>          Drivers
09/09/2009  15:32             <DIR>          EFI
18/11/2009  23:18             <DIR>          Java
14/07/2009  03:37             <DIR>          PerfLogs
18/11/2009  23:37             <DIR>          prnor
18/11/2009  22:56             <DIR>          Program Files
18/11/2009  23:12             <DIR>          software
24/10/2009  00:23             <DIR>          totalcmd
23/10/2009  15:57             <DIR>          Users
27/10/2009  18:59             <DIR>          Windows
                3 archivos          106.773 bytes
                12 dirs 110.662.189.056 bytes libres
C:\>
```

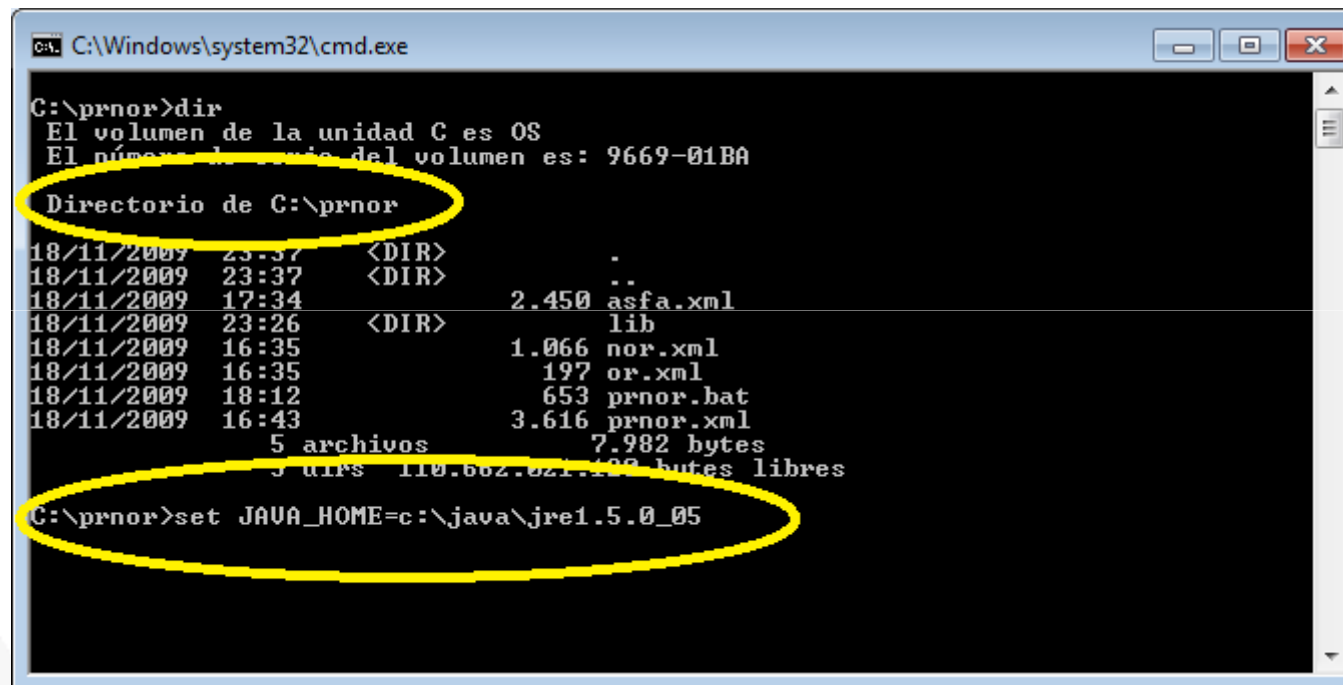
- Copy the prnor directory into the root directory



```
C:\Windows\system32\cmd.exe
C:\>dir
El volumen de la unidad C es OS
El número de serie del volumen es: 9669-01BA
Directorio de C:\
10/06/2009  22:42                24 autoexec.bat
15/10/2009  03:00             <DIR>          boot
16/09/2009  03:42          106.739 Build.Log
10/06/2009  22:42                10 config.sys
23/10/2009  20:43             <DIR>          dell
09/09/2009  16:24             <DIR>          Drivers
09/09/2009  15:32             <DIR>          EFI
18/11/2009  23:18             <DIR>          Java
14/07/2009  03:37             <DIR>          PenLogs
18/11/2009  23:43             <DIR>          prnor
18/11/2009  22:56             <DIR>          Program Files
18/11/2009  23:12             <DIR>          software
24/10/2009  00:23             <DIR>          totalcmd
23/10/2009  15:57             <DIR>          Users
27/10/2009  18:59             <DIR>          Windows
                3 archivos          106.773 bytes
                12 dirs  110.662.352.896 bytes libres

C:\>
```

- You should set the JAVA\_HOME to the location of the installation directory.



The screenshot shows a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The user has entered the command `dir` in the `C:\prnor` directory. The output shows a directory listing with files like `asfa.xml`, `lib`, `nor.xml`, `or.xml`, `prnor.bat`, and `prnor.xml`. Two yellow circles highlight specific parts of the output: the first circle highlights the text "Directorio de C:\prnor" and the second circle highlights the command `set JAVA_HOME=c:\java\jre1.5.0_05` entered by the user.

```
C:\Windows\system32\cmd.exe

C:\prnor>dir
El volumen de la unidad C es OS
El número de serie del volumen es: 9669-01BA

Directorio de C:\prnor
18/11/2009  23:37    <DIR>          .
18/11/2009  23:37    <DIR>          ..
18/11/2009  17:34             2.450 asfa.xml
18/11/2009  23:26    <DIR>          lib
18/11/2009  16:35             1.066 nor.xml
18/11/2009  16:35             197 or.xml
18/11/2009  18:12             653 prnor.bat
18/11/2009  16:43             3.616 prnor.xml
                    5 archivos              7.982 bytes
                    3 dirs             110.602.021.488 bytes libres

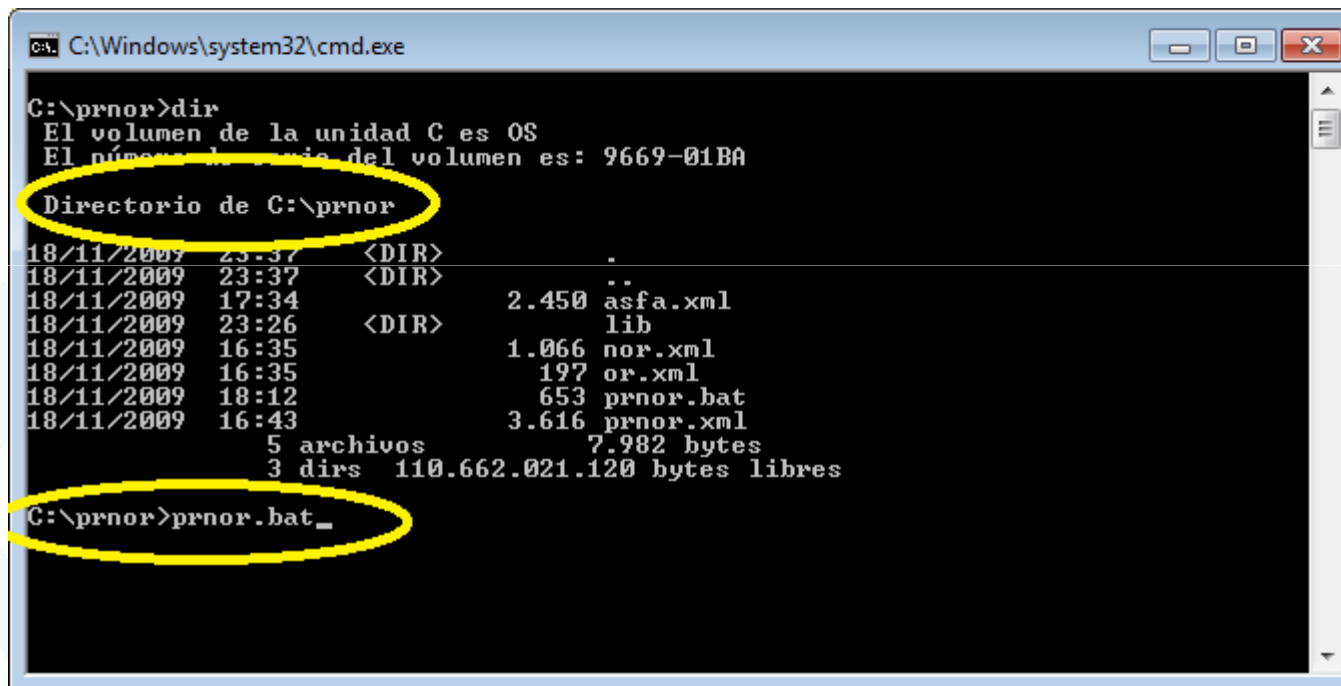
C:\prnor>set JAVA_HOME=c:\java\jre1.5.0_05
```

- European Training Thesaurus (ETT), which is a term-based thesaurus and it follows the record-based model, implemented in an XML file.
- Copy the content of the directory ATHENS\handson\resources\ETT\ into the prnor directory.

- CEPA94, Classification of Environmental Protection Activities (1994), is a classification scheme, which follow a path enumeration data model, and implemented in a database.
- Copy the content of the directory ATHENS\handson\resources\cepa\ into the prior directory.
- Create an ODBC connection to the cepa.mdb



- Run the transformation, executing the prnor.bat file



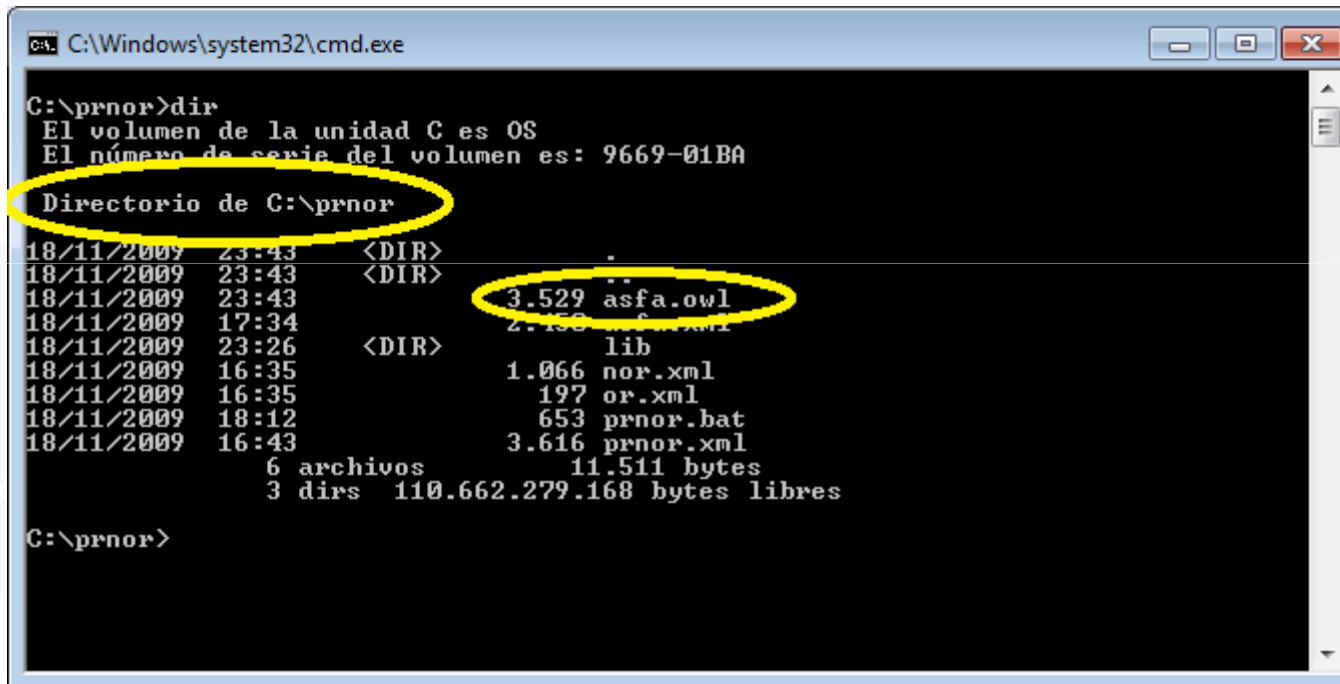
A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The window shows the following text:

```
C:\prnor>dir
El volumen de la unidad C es OS
El número de serie del volumen es: 9669-01BA
Directorio de C:\prnor
18/11/2009  23:37    <DIR>          .
18/11/2009  23:37    <DIR>          ..
18/11/2009  17:34             2.450 asfa.xml
18/11/2009  23:26    <DIR>          lib
18/11/2009  16:35             1.066 nor.xml
18/11/2009  16:35             197 or.xml
18/11/2009  18:12             653 prnor.bat
18/11/2009  16:43             3.616 prnor.xml
                    5 archivos             7.982 bytes
                    3 dirs  110.662.021.120 bytes libres

C:\prnor>prnor.bat_
```

Two yellow circles highlight the text "Directorio de C:\prnor" and the command "C:\prnor>prnor.bat\_" in the screenshot.

- Wait until it finishes, and check the ontology, the .owl file.

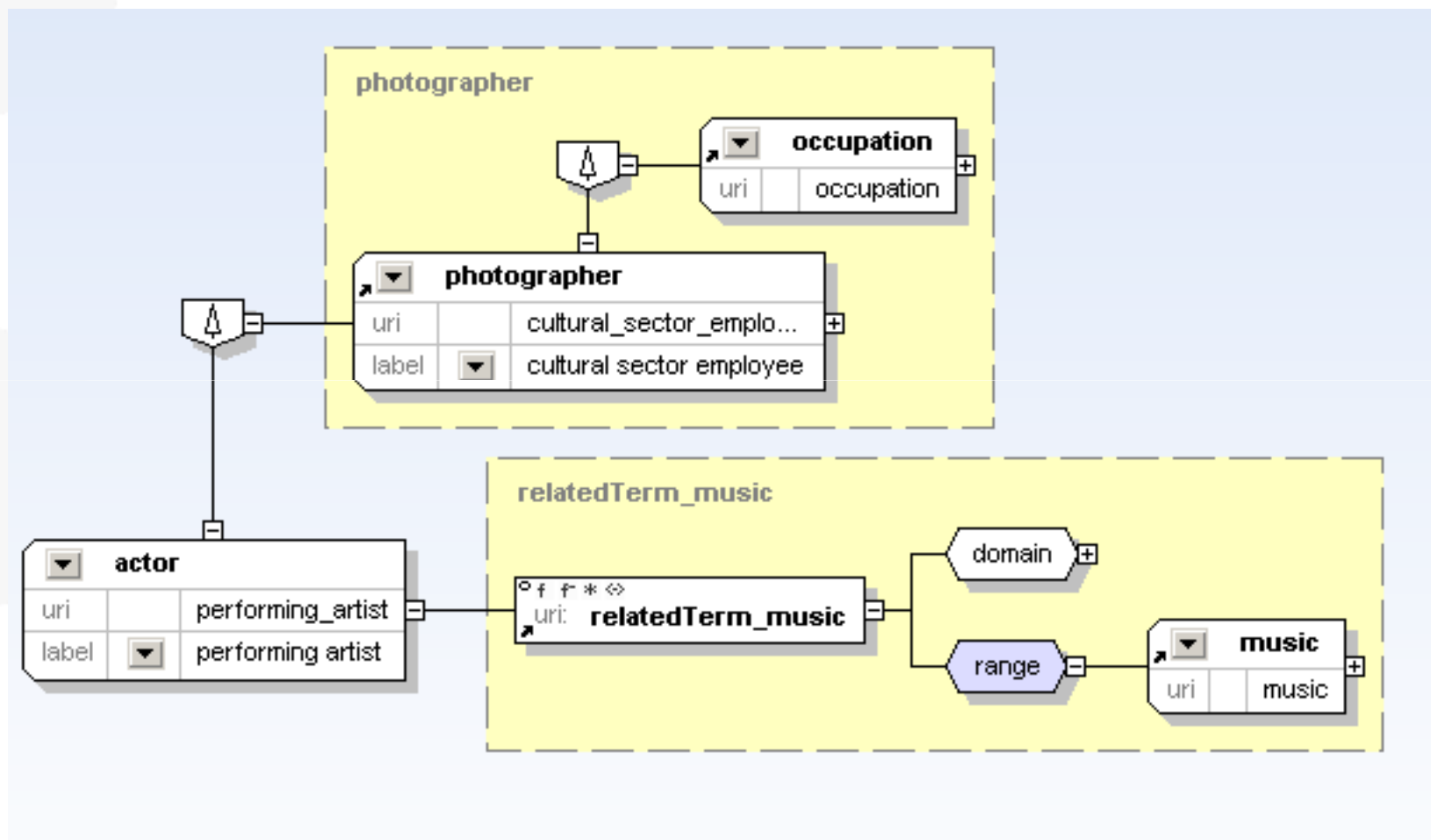


```
C:\Windows\system32\cmd.exe

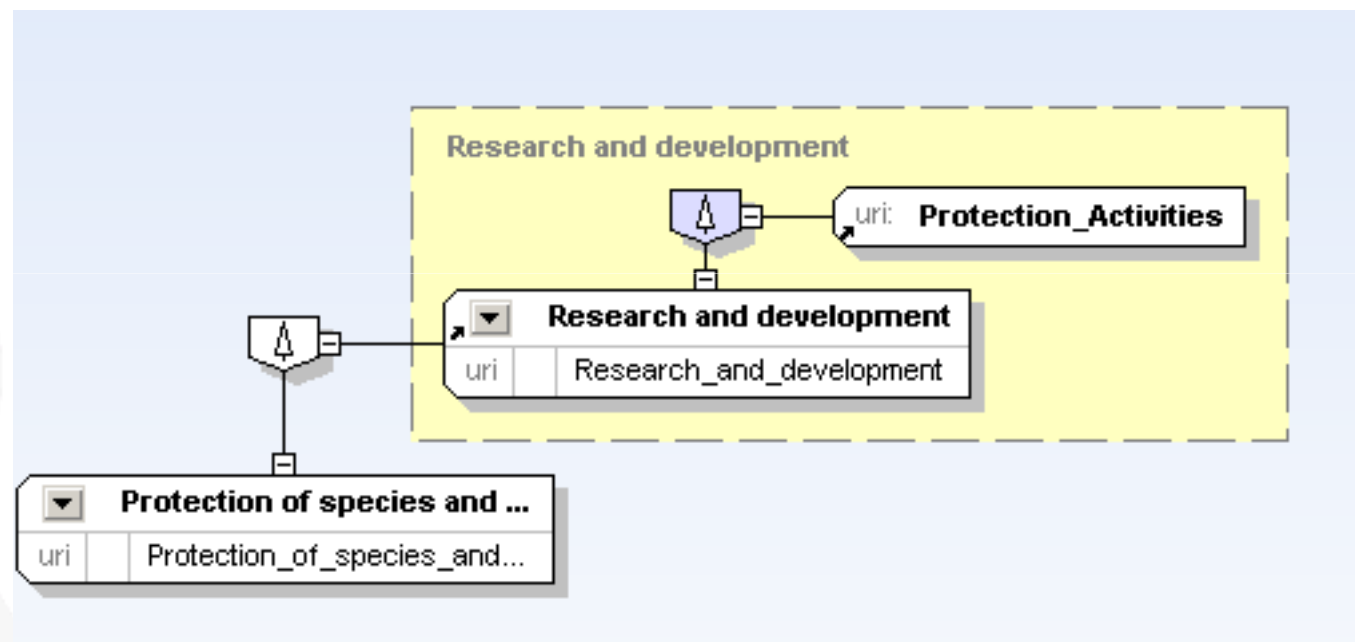
C:\prnor>dir
El volumen de la unidad C es OS
El número de serie del volumen es: 9669-01BA
Directorio de C:\prnor
18/11/2009  23:43    <DIR>          .
18/11/2009  23:43    <DIR>          ..
18/11/2009  23:43    3.529 asfa.owl
18/11/2009  17:34    2.158 asfa.xml
18/11/2009  23:26    <DIR>          lib
18/11/2009  16:35    1.066 nor.xml
18/11/2009  16:35    197 or.xml
18/11/2009  18:12    653 prnor.bat
18/11/2009  16:43    3.616 prnor.xml
               6 archivos             11.511 bytes
               3 dirs 110.662.279.168 bytes libres

C:\prnor>
```

## Excerpt of the ontology from exercise 1



## Excerpt of the ontology generated from exercise 2





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