

## XML Databases (solutions)

### Exercise 1

```
begin
  dbms_xmlschema.registerSchema('info.xsd',
    UriType.createUri(
      'http://lbd.epfl.ch/e/teaching/exosBDA/XML2/info.xsd' )
  );
end;
/

create table infoTable of XMLTYPE
XMLSCHEMA "info.xsd" ELEMENT "info";

insert into infoTable
values(UriType.createUri(
  'http://lbd.epfl.ch/e/teaching/exosBDA/XML2/info.xml '
).getXML());
```

### Exercise 2

1. the document stored in *infoTable*.

```
select object_value from infoTable;
```

2. the level of the "CMPS 378" course.

```
select   extractValue(object_value,
                        '/info/course[number="CMPS 378"]/@level')
from     infoTable;
```

3. the registrations in the course "CMPS 277".

```
select   extract(object_value,
                  '/info/registration[courseNb="CMPS 277"]')
from     infoTable;
```

4. xml schemas, and xml tables that you created.

```
select * from user_xml_schemas;
select * from user_xml_tables;
```

### Exercise 3

1. update the info.xml document to reflect the fact that the student 2004-123456 withdraws the course CMPS 378.

```
update infoTable
set    object_value = updateXML(object_value,
                                '/info/registration[studentID="2004-123456" AND
                                courseNb="CMPS 378"]',
                                xmltype('<registration>
                                <studentID>2004-123456</studentID>
                                <courseNb>CMPS 378</courseNb>
                                <status>withdraw</status>
                                </registration>'))
```

2. insert a second document in *infoTable* which is not valid (enable full instance validation before doing so).

```
alter table infoTable
add constraint VALID_Info
check (XMLIsValid(sys_nc_rowinfo$)=1);

insert into infoTable
values (HttpUriType.createUri(
        'http://lbd.epfl.ch/e/teaching/exosBDA/XML2/info2.xml'
    ).getXML());
```

3. show the mappings done in the structured storage.

```
desc infoTable
desc infoTypexxx_T
etc...
```