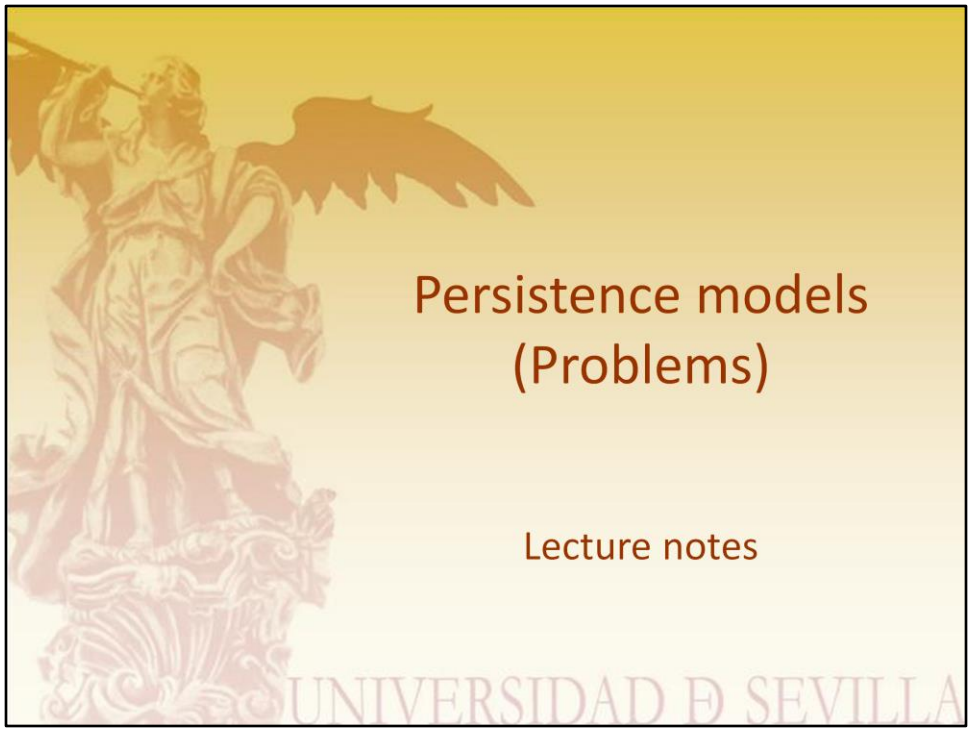

Welcome to this lesson in which our goal's to work with JPA and JPQL in the lab.

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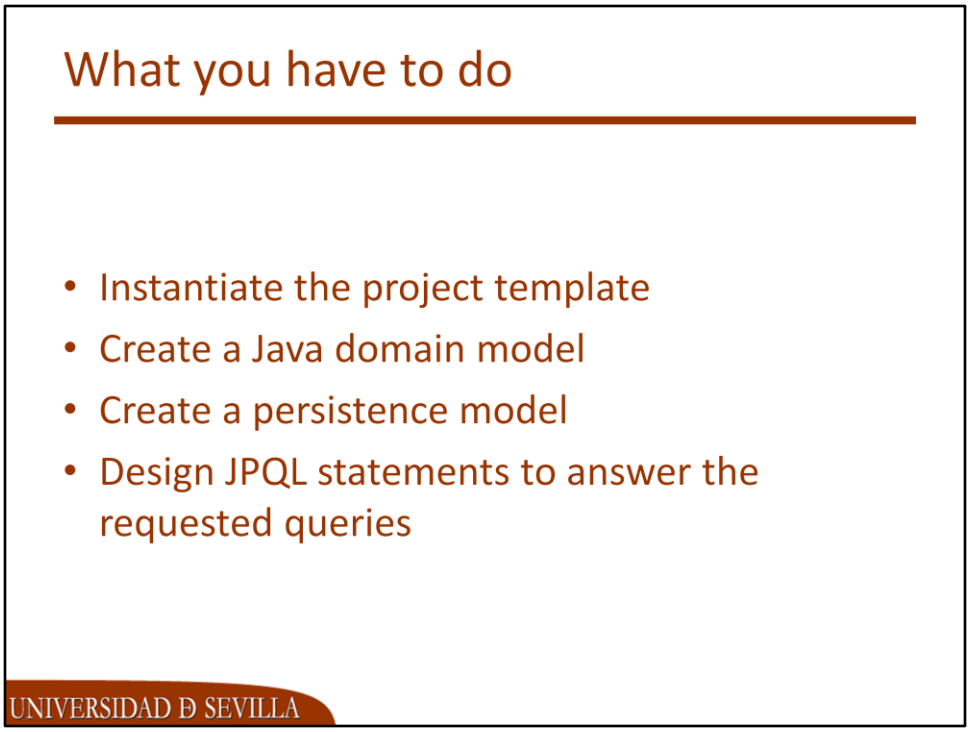

Here you have a description of what you have to do regarding the problems in these lecture notes.

NOTE: the problems on which we're going to work are very simple; they don't put an emphasis on defining who the actors are. As a conclusion, you don't have to create user accounts or authorities; you may leave the default user accounts and authorities that our project template provides.

Problem 4

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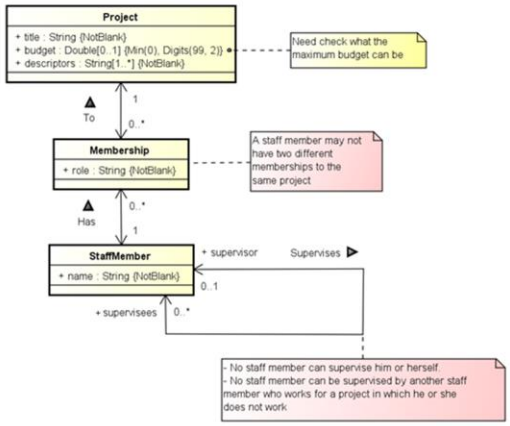
Let’s go ahead with the fourth problem.

Informal conceptual model

- Acme manages projects and their staff
- Acme stores a title and a budget for every project, and a name for every person
- The budget of a project might not be available as of the time of registering it
- A project must have one or more descriptors, which are keywords that describe the project
- Each staff member has a role in each project for which he or she works; the list of roles is open
- A staff member may be the supervisor of other staff members; every staff member may have zero or one supervisor

This slide presents an informal description of the conceptual model you're requested to implement.

UML domain model



This slide presents the UML domain model that we've devised. Please, pay attention to the yellow note.

Requested queries

- Select the projects with the maximum budget
- Select the average budget of the projects
- Select the average number of descriptors per project
- Select the names of the staff members and the titles of the projects in which they're involved

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And these are the queries that you're requested to produce.

Problem 5

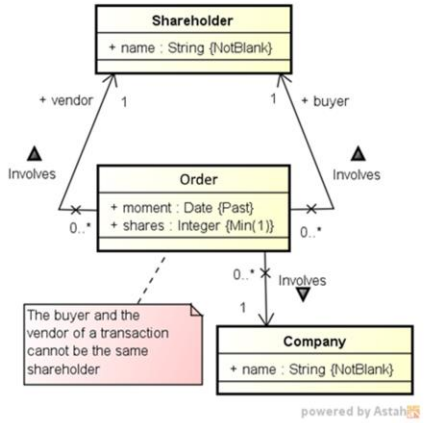
Let’s now delve into the fifth problem.

Informal conceptual model

- Acme manages stock exchange orders
- For every order, Acme stores the company, the vendor, and the buyer who are involved, plus the moment and the amount of shares sold/bought
- For every shareholder, Acme stores his or her name
- For every company, Acme stores their name

This is an informal description of the conceptual model on which you have to work.

UML domain model



This is the UML domain model that we propose to model the previous informal requirements.

Requested queries

- Select the vendor's name, the buyer's name and the company involved in every transaction.
- Select the maximum number of shares exchanged in a transaction
- Select the names of the shareholders and the number of transactions in which they've been vendors
- Select the transactions that took place before the year 2010

And these are the queries that you're requested to produce.

Problem 6

This is the sixth problem.

Informal conceptual model

- Acme distributes newspapers to newsagents
- Newsagents are located at an address, and many of them are also characterised by their GPS co-ordinates
- Each newsagent requires a given quantity of a given newspaper
- Every newspaper has a title, a contact person, and a contact phone

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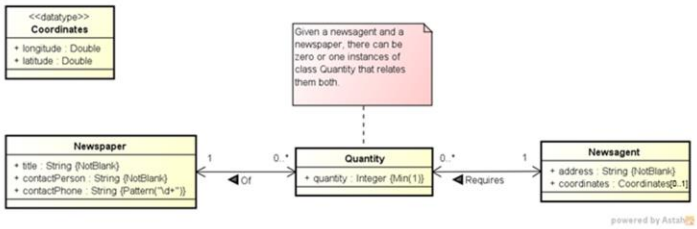
Please, find the informal requirements that you have to implement in this slide.

UML domain model



Here you can take a look at the UML domain model that we have developed.

Requested queries

- Select the titles of the newspapers
- Select the coordinates of the newsagents
- Select the titles of the newspapers and the total quantities requested
- Select the title of the newspapers, the quantities requested, and the address of the corresponding newsagents
- Find the newsagents that don't have GPS co-ordinates

And these are the queries that you're requested to produce.

Thanks for attending this lesson!