# Database Course Project Implementation

The purpose of this session is to work with your teammates to implement the ER of your project. You may need to review the second lab in the semester on how to use Mysql Workbench to create a database, tables, set primary or foreign keys and constraints.

You submitted the ER of your project already, please review it with your team to discuss the following tasks:

* Deciding about datatypes, their length, and constraints; char, varchar(n), value of n, not null, unique etc.
* For foreign keys, what should be done in case the referenced primary key record was deleted or updated: ON DELETE and ON UPDATE actions.

After finalizing those decisions, one or two people could start creating the database on Workbench. The other(s) can prepare the data to be imported into the database:

* For each table, create a CSV file and type couple of records per each table. You can use Excel for data entry and then save it as CSV file.
* When entering the records in the csv file be aware of the constraints you set in your database; for example, the values you enter for a foreign key column must exist in the primary key column values of the other csv file.
  + If there are some co-dependency like what we have in COMPANY tables employee and department, then look back at chapter 6 labs on how we handled that.

While database implementation and population are in progress, you can think of what queries you need to run, what kind of reports a user could get from your database, and what views to create to make it easier for a user or a programmer to query over your database.

## Backup and sharing the database

In case your teammates want to have a copy of the database, either you can use export and import utilities of Workbench to copy the database to another machine or you can use command line statements (especially if Workbench export function doesn’t work):

* Backup:

mysqldump -u root -p COMPANY > COMPANY.sql

* Restore:

mysql -u root -p COMPANY < COMPANY.sql

(if COMPANY does not exist, create it before running the restore statement).