# Homework M7: Databases. Web Servers and Web Applications

For a successful completion of the tasks it is enough use just one machine. In our case this could be for example the server (**Jupiter**) or any of the other two (either **Mars** or **Venus**) or why not a new one. As we said multiple times, it is better to start fresh, so create (from template) a new machine.

Let’s assume that the following list of tasks will be performed on **a new** virtual machine:

1. Install **Apache** web server and set it to **start** on **system** **boot**
2. Make it **accessible** **outside** the host
3. Create a **simple** page named **demo.html** that contains a welcome message and store it in a folder in which Apache will be able to reach it. Write down the **code**, the **place,** and the **URL**
4. Create a **virtual** **host** named for example **secure.lsa.lab** (if your server is named **xxx.yyy.zzz** then the virtual host should be named **secure.yyy.zzz**). Then make it accessible only authenticated users and create two users
5. Adjust the **hosts** file so that it reflects the **virtual** host
6. Install **text-based browser** and test the virtual host
7. Install **MariaDB** and follow the recommended practice of initial **security setup**
8. Create a database named **city\_stats**
9. Create a **user** who has **all** **privileges** over the database and set its password to **S3cP@ss**
10. Create a **table** that will store the list of the top **10 cities** in **Bulgaria** by **population**. The table should have two columns – one for the **city** **name** (of type **varchar**) and another one for the **population** (of type **int**)
11. **Insert** records for the **top 10 cities** according to the **latest** **statistical** data you can find or if you cannot then make **your own data**
12. Write a **select** **statement** to retrieve cities with **population** **greater** or **equal** to **150000**
13. Make a **backup** of the database under the name **city\_stats.sql**
14. **Install** both the **php** and its corresponding **module** for **MySQL**
15. Create a simple **php** page named **population.php** to **read** the top 10 cities **from** the **database** and then **show** them on the **screen**. Put the script in the root folder of the virtual host created earlier
16. Using your text-based browser try to access the **population.php** page

## Proof

Upload a document (txt, doc, docx, pdf) containing the commands that you executed in order to accomplish the above tasks.