

## Lab 1 (Oracle)

### Exercise 1 (0,5 points, mandatory to solve and document)

Using SQL Developer, change your initial database password. Choose a password that you do not use elsewhere and does not contain letters with accents. Document your new password in your lab report.

### Exercise 2 (1+0,5p)

Examine the database users. Determine what system level and object level privileges you have as a user directly. Also find out what object level privileges you have got directly through the role called HALLGATO\_ROLE. (1p)

Remark: when examining the directly granted privileges, you don't need to examine privileges granted through another role.

Extra task: Find out how many concurrent sessions you can have as a student, in the database. Some extra information: HALLGATO\_ROLE is the role that all student users have. (+0,5p)

Tip: When finishing your work, always close your connection with the database.

### Exercise 3 (1p)

Using SQL Developer, examine the physical storage structure of the database. Determine, how many data files belong to the OKT tablespace. List the name, size, status, and utilization of each of these files.

### Exercise 4 (total: 2 points)

Based on the informal description below, design an Entity-Relationship (ER) diagram, using the notation you learned during the lectures. Using SQL Developer, create the corresponding tables.

We would like to model the continents and countries of the world. Each country belongs to exactly one continent. One continent can include zero, one, or many countries. Each country is identified by its name. We also store the capital, the population, and the area of each country, and whether it has a coastline or not. The name and year of discovery is stored for every continent.

### Exercise 5 (total 1,5 points, +1 pont for a valuable remark)

Let us assume that you and one of your classmates are business partners (in order to solve the exercise, you can be a partner of more than one of your classmates). In order to be able to use each other's tables created in Exercise 4, grant select and update privileges to your partner, using SQL Developer. Make sure, you do not grant any other privilege to your partner. Examine the new privileges that you got. Make sure, that only your partner gets the privileges you granted to her/him. Observe the SQL statements executed while granting the privileges. In your report, include the output of the SQL script below. The script lists the granted and received privileges, using the appropriate view of the data dictionary. (In SQL Worksheet, use Run script of F5. Make sure that the documented output is well-readable in your lab report.)

```
column grantor format a8;
column grantee format a8;
column table_name format a20;
column privilege format a20;
select grantor
       , grantee
       , table_name
       , privilege
       , initcap(grantable) grant_opt
  from all_tab_privs
 where grantor = user
       or grantee = user
 order by grantor, grantee, table_name, privilege
```

### Exercise 6 (0,5p)

Insert example data to the newly created tables (minimum 3 records in each table)

2: 3<; 3: 4<=; 4: 5<=; 5: 6<=