

LAB 3 – MATEUSZ NOWOTNIK

1.

Connected as a root

2a.

```
CREATE TABLE teams1
(
  name CHAR(30),
  teamid smallint,
  manid smallint,
  PRIMARY KEY(teamid)
) engine=InnoDB
```

2b.

```
CREATE TABLE emp1
(
  empid smallint,
  gender char(1),
  birthdate datetime NOT NULL,
  name char(30) NOT NULL,
  teamid smallint,
  PRIMARY KEY(empid)
) engine=InnoDB
```

3a.

```
INSERT INTO teams1(name, teamid, manid)
SELECT team_name, team_id, manager_id
FROM teams
```

3b.

```
INSERT INTO emp1(empid, gender, birthdate, name, teamid)
SELECT employee_id, gender, date_of_birth, emp_name, team_id
FROM employees
```

4a.

```
ALTER TABLE teams1 ADD CONSTRAINT MAID_CON
FOREIGN KEY (manid) REFERENCES emp1(empid) ON DELETE RESTRICT
```

4b.

```
ALTER TABLE emp1 ADD CONSTRAINT ID_CON
FOREIGN KEY (teamid) REFERENCES teams1(teamid) ON DELETE SET NULL
```

4c.

emp1

#	Name	Datatype	Length/Set	Unsign...	Allow N...	Default
1	empid	SMALLINT	6	<input type="checkbox"/>	<input type="checkbox"/>	0
2	gender	CHAR	1		<input checked="" type="checkbox"/>	NULL
3	birthdate	DATETIME			<input type="checkbox"/>	No default
4	name	CHAR	30		<input type="checkbox"/>	No default
5	teamid	SMALLINT	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NULL

teams1

#	Name	Datatype	Length/Set	Unsign...	Allow N...	Default
1	name	CHAR	30		<input checked="" type="checkbox"/>	NULL
2	teamid	SMALLINT	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NULL
3	manid	SMALLINT	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NULL

5.

-- INSERT COMMAND

```
INSERT INTO emp1(empid, gender, birthdate, name, teamid)
VALUES(10,'F','1965-11-06 00:00:00',NULL,10)
-- prints out column name cannot be NULL
```

```
INSERT INTO emp1(empid, gender, birthdate, name, teamid) VALUES(10,'F',
NULL,'Nowotnik',10)
-- prints out column birthdate cannot be NULL
```

```
INSERT INTO emp1(empid, gender, birthdate, name, teamid) VALUES(10,'F',
'1965-11-06 00:00:00','Nowotnik',10)
-- works correctly
```

-- DELETE COMMAND

```
DELETE FROM emp1 WHERE teamid=11
-- cannot delete
```

```
DELETE FROM emp1 WHERE teamid=110
-- works
```

```
DELETE FROM emp1 WHERE teamid=150
-- works fine
```

-- UPDATE COMMAND

```
UPDATE emp1 SET manid=11 WHERE teamid=4
-- cannot update
```

```
UPDATE emp1 SET manid=15 WHERE teamid=2
-- cannot update (it's referenced by teams)
```

```
UPDATE emp1 SET manid=20 WHERE teamid=40
-- works fine
```

6a.

```
CREATE USER 'user1'@'localhost' IDENTIFIED BY 'user1';
GRANT SELECT ON employees to 'user1'@'localhost';
ALTER USER 'user1'@'localhost' WITH PASSWORD = 'user1';
```

6b.

```
select * from employees
```

```

-- displays the employees table

6c.
drop table employees
-- Trying to delete the employees table results in 'command denied to user'

6d.
select * from subjects
-- 'command denied to user'

6e. Connect as root
GRANT DELETE ON teams to 'user1'@'localhost'

6f. Connect as user1
select * from teams
-- cannot access that table

6g.
delete from teams where team_id=1
-- command denied

6h. Connect as root
GRANT SELECT ON teams to 'user1'@'localhost';

6i. Connect as user1
delete from teams where team_id=1
-- the query now works, because we granted user1 the select privilege

6j. Connect as root
CREATE VIEW "DATABASES" AS
SELECT employee_id, emp_name
FROM employees emp JOIN teams t on t.team_id=emp.team_id
where t.team_name ='DATABASES'

6k.
GRANT SELECT ON DATABASES TO 'user1'@'localhost'

6l. Connect as user1
SELECT * FROM DATABASES

6m.
select * FROM employees
6n.
update DATABASES set emp_name='JOHN' where emp_name='JOHNNY'
-- access denied

6o. Connect as root
GRANT UPDATE ON DATABASES TO 'user1'@'localhost'

6p. Connect as user1
update DATABASES set emp_name='JOHN' where emp_name='JOHNNY'
-- it works, because user1 was granted the permission to update

6q. Connect as root
update DATABASES set emp_name='JOHN' where emp_name='JOHNNY'
-- works as well, because we are updating as the root

6r.
create view "DATABASES1" AS SELECT emp_name from employees

6s.

```

```
update "DATABASES1" set emp_name = 'VIS' where emp_name = 'VISTULA'
```

6t.

```
grant SELECT, UPDATE on "DATABASES1" to 'user1'@'localhost'
```

6u. Connect as user1

```
update "DATABASES1" set emp_name='MUSHROOMS' where  
EMP_NAME='MUSHROOMPICKER'
```

-- works fine, because we have the permission to update

6v. Connect as root

```
CREATE USER 'sec1'@'localhost' IDENTIFIED BY 'sec1'
```

6w.

```
GRANT SELECT ON subjects TO 'sec1'@'localhost'
```

6x. Connect as sec1

```
SELECT * FROM subjects
```

6y.

```
GRANT SELECT ON subjects TO 'user1'@'localhost'
```

--s we cannot grant select permission to user1, because sec1 doesn't have grant option

6z. Connect as root

```
GRANT SELECT ON subjects TO 'sec1'@'localhost' WITH GRANT OPTION
```

6aa. Connect as sec1

```
GRANT SELECT ON subjects TO 'user1'@'localhost'
```

-- it works because sec1 has grant option

6zz. Connect as user1

```
SELECT * FROM subjects
```