SEOULTECH
Seoul National University of Science & Technology

Lab Assignment #3

- Assignment Overview
  - **Released date**: 5/16
  - **Due date**: 5/22 23:59 PM
  - **Assigned points**: 2
  - **Submission:** a word file consisting of 1) the captured screen shots and 2) the explanation of each step
  - **Where to submit**: to e-class (http://eclass.seoultech.ac.kr)
  - Late submission is not allowed

HW Assignment #1

Directions

1. We will now create a new table named "T", having three columns: id (of type integer, the primary key), s (of type character string with a length varying from 1 to 40 characters), and si (of type small integer)
2. Then, insert some rows to the newly created table:
   - INSERT INTO T (id, s) VALUES (1, 'first');
   - INSERT INTO T (id, s) VALUES (2, 'second');
   - INSERT INTO T (id, s) VALUES (3, 'third');
3. Check the data stored in T
4. Try to cancel or rollback the current transaction and check the data in table T
   - **Capture the screen showing the results**
5. Try to execute “commit;” command before rollback the transaction in 4 and compare the result with it in 4
   - **Capture the screen showing the results**

Submit two screen shots above

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HW Assignment #2

Create a simple table

```
create table Worker(
WorkerID varchar(20),
WorkerName varchar(255),
WorkerJob varchar(255),
CONSTRAINT PK_Worker PRIMARY KEY (WorkerID)
);
```

```
insert into worker values ('1','John', 'nurse');
insert into worker values ('2','Grace', 'farmer');
insert into worker values ('3','Smith', 'doctor');
```

Do locking test for a specific record (i.e., one tuple) using two different transactions

- To obtain a lock for a specific record, you can use a command “select .. .from … where…. for update”. Then, the tuples satisfying the conditions will be locked. To use two different transactions and check their results, open two SQL Plus windows.

Test the following cases

- [Case1] In the first transaction, lock a record; In the second transaction, try to access the same record
  - **Capture the screen where the second transaction is blocked while presenting the used queries**
- [Case2] To release the lock in the first transaction, execute “commit” where the previous lock has been obtained
  - **Capture the screen where the second transaction is unblocked**
- [Case3] Try to test obtaining the lock for a different record from the second transaction while the first transaction has a lock for a specific record as in Case1
  - **Capture the screen where the second transaction can access the data**

Submit three screen shots above