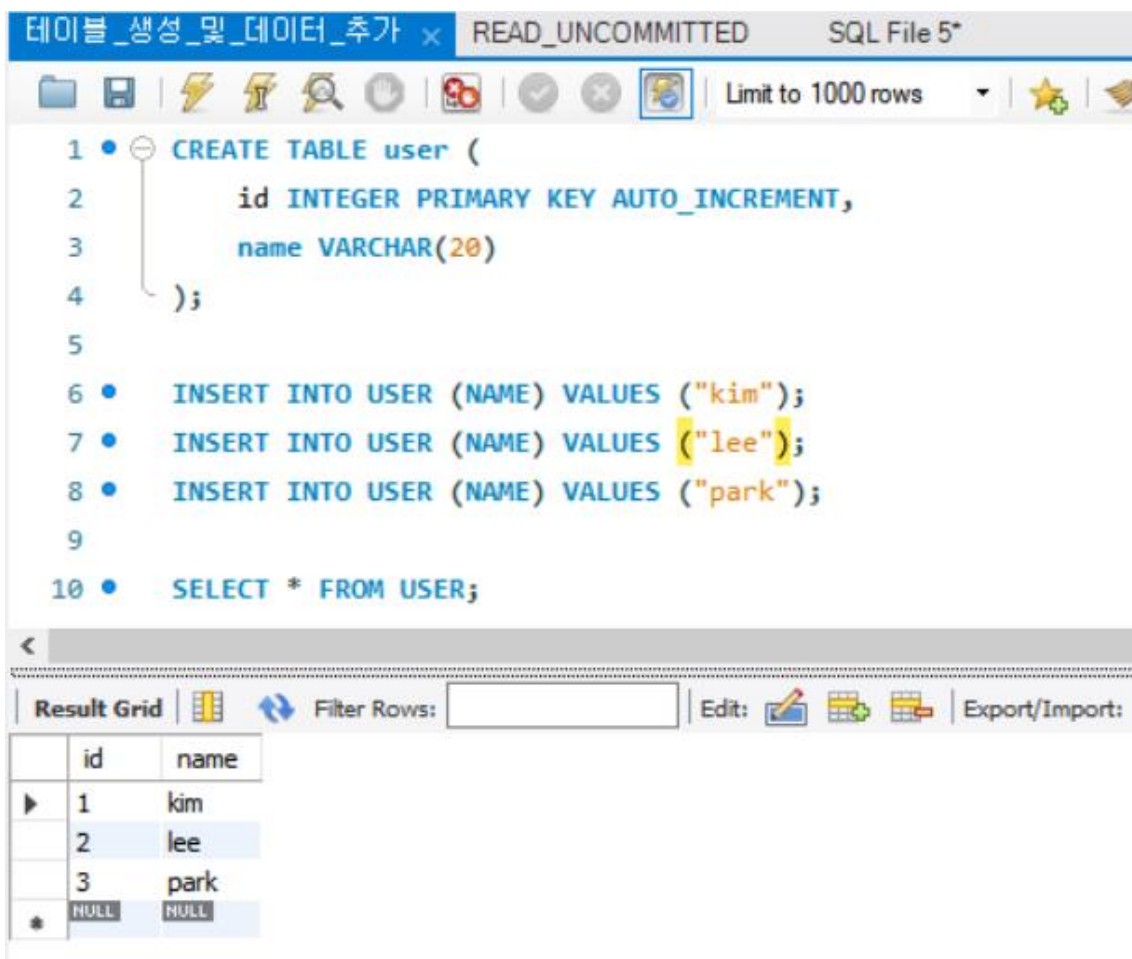


2020년도 1학기

데이터베이스

Homework #3 트랜잭션

1) 과제용 테이블 생성 및 데이터 추가



The screenshot shows a SQL IDE window titled "테이블_생성_및_데이터_추가" with a "READ_UNCOMMITTED" session and "SQL File 5*" document. The SQL editor contains the following code:

```
1 CREATE TABLE user (  
2     id INTEGER PRIMARY KEY AUTO_INCREMENT,  
3     name VARCHAR(20)  
4 );  
5  
6 INSERT INTO USER (NAME) VALUES ("kim");  
7 INSERT INTO USER (NAME) VALUES ("lee");  
8 INSERT INTO USER (NAME) VALUES ("park");  
9  
10 SELECT * FROM USER;
```

Below the editor, the "Result Grid" shows the output of the SELECT statement:

	id	name
▶	1	kim
	2	lee
	3	park
*	HULL	HULL

이후부터는 왼쪽이 transaction 1, 오른쪽이 transaction 2이며, transaction 1의 첫 테이블 출력은 transaction 2 실행 전이고 두 번째 테이블 출력은 transaction 2 실행 후 이다.

2) read uncommitted의 경우

```

mysql>
mysql>
mysql> SET SESSION TRANSACTION ISOLATION LEVEL READ UNCOMMITTED;
Query OK, 0 rows affected (0.00 sec)

mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM USER;
+----+-----+
| id | name |
+----+-----+
|  1 | kim  |
|  2 | lee  |
|  3 | park |
+----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM USER;
+----+-----+
| id | name |
+----+-----+
|  1 | updated |
|  2 | lee     |
|  3 | park    |
|  4 | new     |
+----+-----+
4 rows in set (0.00 sec)

mysql>

```

```

mysql> Type 'help;' or '\h' for help. Type '\w' to clear the current
mysql> USE HW3;
Database changed
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> UPDATE USER SET NAME = "updated" WHERE ID = 1;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> INSERT INTO USER (NAME) VALUES ("new");
Query OK, 1 row affected (0.01 sec)

mysql>

```

3) read committed의 경우

```

mysql>
mysql>
mysql> SET SESSION TRANSACTION ISOLATION LEVEL READ COMMITTED;
Query OK, 0 rows affected (0.00 sec)

mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM USER;
+----+-----+
| ID | NAME |
+----+-----+
|  1 | kim  |
|  2 | lee  |
|  3 | park |
+----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM USER;
+----+-----+
| ID | NAME |
+----+-----+
|  1 | kim  |
|  2 | lee  |
|  3 | park |
+----+-----+
3 rows in set (0.00 sec)

mysql>

```

```

mysql> Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.19 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\w' to clear the current input statement.

mysql> USE HW3;
Database changed
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> UPDATE USER SET NAME = "updated" WHERE ID = 1;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> INSERT INTO USER (NAME) VALUES ("new");
Query OK, 1 row affected (0.01 sec)

mysql>

```

두 결과를 비교하였을 때 transaction 2에 대한 두 경우 모두 commit이 이루어지지 않았는데 read uncommitted의 경우 해당 작업이 transaction 1의 테이블 출력에 반영되었으나 read committed에서는 반영되지 않았다.