

EXERCISE 1

```
CREATE TABLE account(
    username varchar(50) NOT NULL,
    fullname varchar(50) NOT NULL,
    balance integer,
    group_id integer NOT NULL);
INSERT INTO account VALUES
    ('jones','Alice Jones',82,1),
    ('bitdiddl','Ben Bitdiddle',65,1),
    ('mike','Michael Dole',73,2),
    ('alyssa','Alyssa P. Hacker',79,3),
    ('bbrown','Bob Brown',100,3);
```

Read committed isolation level	
Terminal 1	Terminal 2
1. BEGIN TRANSACTION; SELECT * FROM account; <pre>transaction=# BEGIN; BEGIN transaction=# SELECT * FROM account; username fullname balance group_id -----+-----+-----+----- jones Alice Jones 82 1 bitdiddl Ben Bitdiddle 65 1 mike Michael Dole 73 2 alyssa Alyssa P. Hacker 79 3 bbrown Bob Brown 100 3</pre>	2. BEGIN; UPDATE account SET username='ajones' WHERE fullname='Alice Jones';
3. SELECT * FROM account; <pre>transaction=# select * from account; username fullname balance group_id -----+-----+-----+----- jones Alice Jones 82 1 bitdiddl Ben Bitdiddle 65 1 mike Michael Dole 73 2 alyssa Alyssa P. Hacker 79 3 bbrown Bob Brown 100 3</pre>	4. SELECT * FROM account; <pre>transaction=# select * from account; username fullname balance group_id -----+-----+-----+----- bitdiddl Ben Bitdiddle 65 1 mike Michael Dole 73 2 alyssa Alyssa P. Hacker 79 3 bbrown Bob Brown 100 3 ajones Alice Jones 82 1</pre>
Outputs are different, because in the second transaction we didn't commit changes and the first user gets old data (dirty read).	
	5. COMMIT;
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	6. BEGIN;

7. UPDATE account SET balance=balance+10 WHERE fullname='Alice Jones';	8. UPDATE account SET balance=balance+20 WHERE fullname='Alice Jones'; *Waiting*																																																
In the second exercise, the first transaction puts a “lock” on modifying data inside the table and puts other users who want to commit in the queue (like Mutex). Once we commit changes in the first terminal, we become able to modify data in the second terminal. This works because Read committed isolation level.																																																	
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