ECE356 Lab 3 Report

Part One:

When Session 2 has autocommit set to ON:

Session 1 \ Session 2	READ-UNCOMMITTED	READ-COMMITTED	REPEATABLE-READ	SERIALIZABLE
READ-UNCOMMITTED	103	123	123	123
READ-COMMITTED	103	123	123	123
REPEATABLE-READ	103	123	123	123
SERIALIZABLE	103	123	123	123

Since READ-UNCOMMITTED allows Dirty Reads, when session 2 is set to READ-UNCOMMITTED, session 2 can read the updated data before session 1 commits the update, which is the updated value 103.

Since READ-COMMITTED, REPEATABLE-READ and SERIALIZABLE does not allow Dirty Reads, session 2 can only read the committed data, which is the original value 123.

When Session 2 has autocommit set to OFF:

Session 1 \ Session 2	READ-UNCOMMITTED	READ-COMMITTED	REPEATABLE-READ	SERIALIZABLE
READ-UNCOMMITTED	103	123	123	ERROR 1205 (HY000): Lock wait timeout exceeded; try restarting transaction
READ-COMMITTED	103	123	123	ERROR 1205 (HY000): Lock wait timeout exceeded; try restarting transaction
REPEATABLE-READ	103	123	123	ERROR 1205 (HY000): Lock wait timeout exceeded; try restarting transaction
SERIALIZABLE	103	123	123	ERROR 1205 (HY000): Lock wait timeout exceeded; try restarting transaction

Since READ-UNCOMMITTED allows Dirty Reads, when session 2 is set to READ-UNCOMMITTED, session 2 can read data before session 1 commits the update, which is 103.

Since READ-COMMITTED and REPEATABLE-READ does not allow Dirty Reads, session 2 can only read the committed data, which is 123.

Since SERIALIZABLE also does not allow Dirty Reads and the autocommit is set to OFF, session 2 has to wait for session 1 to commit, which results in a Lock-wait error.