**ECE356 Lab 3 Report**

**Part One:**

**When Session 2 has autocommit set to ON:**

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| --- | --- | --- | --- | --- |
| Session 2  Session 1 | 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.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Session 2  Session 1 | 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 |

**When Session 2 has autocommit set to OFF:**

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.