



Weekly Research Progress Report

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Date:6/22/2020

of hrs worked this week: 30

Problems discussed in last week's report

1. Categorizing test cases

- a. [Assumption of the test cases](#)
- b. [Test cases in Google sheet](#)

2. Reference materials

- a. Making snapshot isolation serializable, ACM Transactions on DB systems, 2005
- b. A Read-Only Transaction Anomaly Under Snapshot Isolation, SIGMOD, 2004
- c. A Critique of ANSI SQL Isolation Levels, SIGMOD, 1995

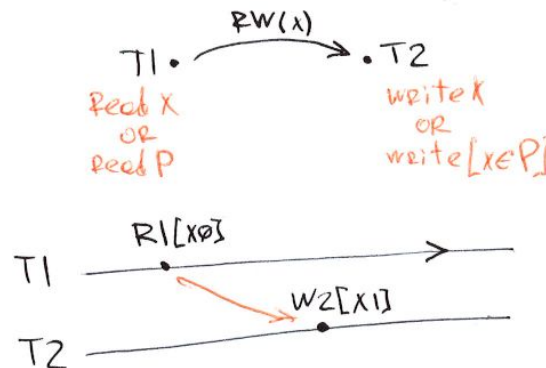
Test cases for RC

O : Preventable X : Unavoidable

	Test ID	P0	P1	P2	P3	P4	P5
	Isolation	Dirty Read	Dirty Write	Fuzzy Read	Lost update	Read Skew	Write Skew
Expected	RC	O	O	X	X	X	X
	RC + SSN	O	O	O	O	O	O
Tested (6/22/2020)	RC + SSN	O	O	X	X	X	X

The current test cases contain anti-read dependency.

- The current version has no MV.
- The current version checks the latest version of the items in the KVstore
 - This logic generates the abort
 - Currently this logic is ignored in the current test case



The KVstore is assumed to be independent from the validator.

- The validator commits the transactions synchronously ordered by their CTS.
- The test cases avoid debugging the metadata of the KVstore, but simulate.

The KVstore assumes to have the data before it is read.

- Transaction T0 always initializes the KVStore items that will be used for the test cases.