

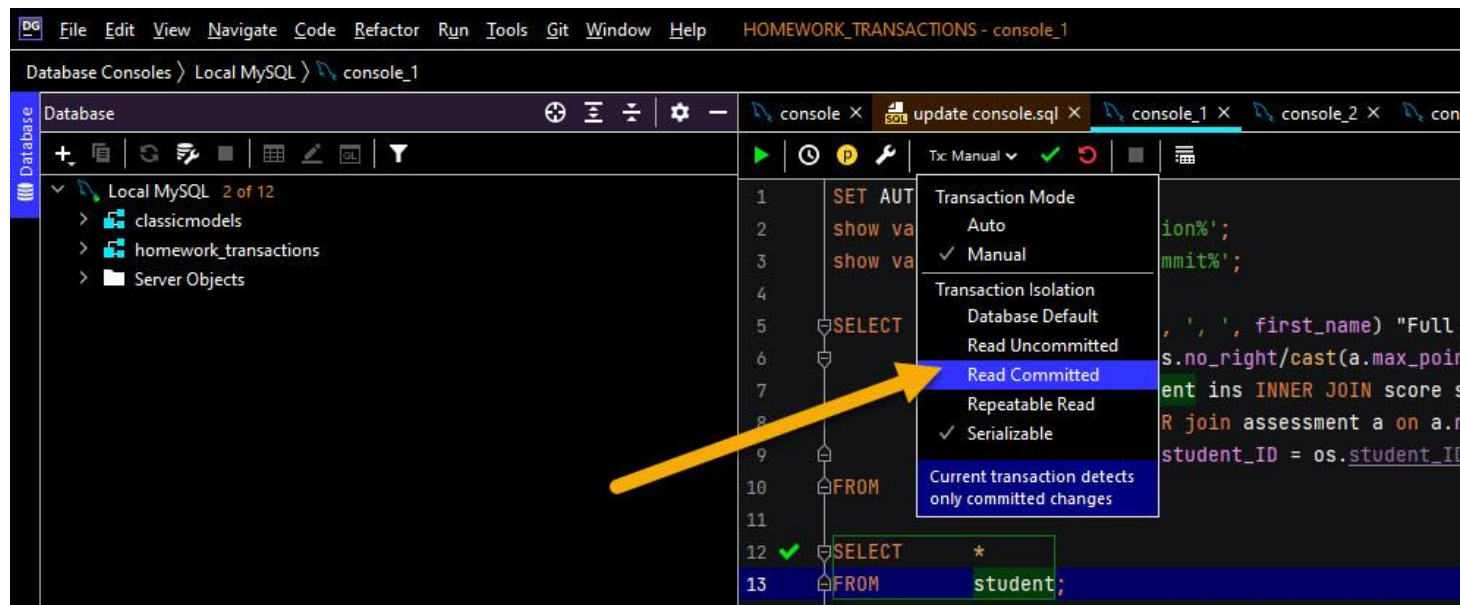
# CECS 323 HOMEWORK: TRANSACTIONS

**OBJECTIVE:** Get some more experience working with different transaction isolation levels.

**INTRODUCTION:** We are going to use MySQL at all four of its isolation levels at once, and experiment with inserting new rows as well as changing data in existing rows to see what happens at the various transaction isolation levels. We are also going to do just a little bit of experimentation with a savepoint.

**PROCEDURE:** There are several DML statements that you will need to run, as well as the DDL necessary to construct the tables. All those statements can be found [here](#). Look at the comments just before the statements to match them to the instructions in the table below. You should not have to type any DML, just cut and paste from the file I just gave you.

Using DataGrip, we can set the transaction isolation level this way:



Note that you must properly set the transaction isolation level in each console within DataGrip.

Perform the following actions, and capture what you got back from MySQL in the Result column. Where you see more than one Transaction getting the same action, the result in all those transactions will be the same. In the result column, be sure to write in any comments/questions that you have regarding your results.

## CECS 323 HOMEWORK: TRANSACTIONS

Update window	Transaction 1	Transaction 2	Transaction 3	Transaction 4	Result
Create the three tables, and perform inserts into all three.					
<pre>SHOW VARIABLES like '%isolation%';</pre>					REPEATABLE-READ – this is the default for MySQL. But we will not do any reading from this transaction.
SET AUTOCOMMIT=0;	SET AUTOCOMMIT=0;	SET AUTOCOMMIT=0;	SET AUTOCOMMIT=0;	SET AUTOCOMMIT=0;	This turns off the autocommit so that you have control of when one transaction ends and the next begins in each of your consoles.
	Use DataGrip to set session transaction isolation level to <b>read-committed</b> .	Use DataGrip to set session transaction isolation level to <b>repeatable read</b> .	Use DataGrip to set session transaction isolation level to <b>serializable</b> .	Use DataGrip to set session transaction isolation level to <b>read-uncommitted</b> .	
Insert a fresh set of rows, for David Banner.					
	Run the select to get the average % for each assessment				
		Run the select to get the average % for each assessment			
			Run the select to get the average % for each assessment		

## CECS 323 HOMEWORK: TRANSACTIONS

				Run the select to get the average % for each assessment	
Rollback;					
	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment	
Update the Tony Stark rows to add 2 to each score.					
	COMMIT;	COMMIT;	COMMIT;	COMMIT;	
Update the Tony Stark rows to add 2 to each score.					
	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment			
			Run the select to get the average % for each assessment		
				Run the select to get the average % for each assessment	
SAVEPOINT grease;					
Update just Tony Stark's final grade to be what it was – 20.					
	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment			
			Run the select to get the average % for each assessment		

## CECS 323 HOMEWORK: TRANSACTIONS

				Run the select to get the average % for each assessment	
ROLLBACK WORK TO SAVEPOINT grease;					
	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment			
			Run the select to get the average % for each assessment		
				Run the select to get the average % for each assessment	
			COMMIT;		
Insert David Banner rows again					
	Run the select to get the average % for each assessment	Run the select to get the average % for each assessment			
			Run the select to get the average % for each assessment		
				Run the select to get the average % for each assessment	

### WHAT TO TURN IN:

- The table above, filled in with your results.
- Your team's filled out collaboration document. You can find a template for that [here](#).