CSCI235: Database Systems

Assignment 2

Nicholas Monteleone 5055076

Task 4

1)

Transaction 1	Transaction 2
	SELECT NVL(MAX(unit_price), 0) INTO max_unit_price FROM PRODUCT;
UPDATE PRODUCT SET unit_price = unit_price + 0.1*unit_price WHERE product_name = product_plus;	
	UPDATE PRODUCT SET unit_price = unit_price + 0.01*max_unit_price WHERE units_in_stock > 60;
UPDATE PRODUCT SET unit_price = unit_price - 0.1*unit_price WHERE product_name = product_minus;	
	UPDATE PRODUCT SET unit_price = unit_price + 0.02*max_unit_price WHERE units_in_stock <= 60;
	COMMIT;
COMMIT;	

Above schedule shows concurrent processing of the procedure from Task 3 (assumed to be changed to serializable isolation level) and the procedure from Task 4. With a serializable isolation level this function fails due to an update being done to the unit_price variable by T2, causing a conflict with T1.

This will result in a failure of both transactions as they both are both writing to the same variable before the other transaction is completed and committed.