Assignment 3

Please turn in this homework with hardcopy (in class) at the end of the class in November 29, 2017 (Wednesday)

1. There are two transactions T1 and T2, and they are executed concurrently, as shown in the following figure:

T1	T2
Read(X)	
X = X - 5	
	Read(X)
	X = X + 5
Write(X)	
	Write(X)
COMMIT	
	COMMIT

Question: Does the above schedule results in **lost updates**, **dirty read**, or **both**?

2. There are two transactions T1 and T2, and they are executed concurrently, as shown in the following figure:

T1	T2
Read(X)	
X = X - 5	
Write(X)	
	Read(X)
	X = X + 5
	Write(X)
ROLLBACK	
	COMMIT

Question: Does the above schedule results in **lost updates**, **dirty read**, or **both**?

3. There are two transactions T1 and T2, and they are executed concurrently, as shown in the following figure. Is this schedule a serializable schedule? **Please give your reason**.

T1:	T2:
Lock(A) Read(A) A = A + 100 Write(A) Lock(B) Release(A)	
	Lock(A) Read(A) A = 2*A Write(A) Lock(B)
Read(B) B = B + 100 Write(B) Release(B)	
	Lock(B) Release(A) Read(B) B = 2*B Write(B) Release (B)