CSCI 4380 Spring 2018 Quiz 7 [Time: 20 minutes]

Name 1:	RCS ID1:
Name 2:	RCS ID2:
Name 3:	RCS ID3:

Rules.

- Open book and notes. Do not use any electronic tools including your computer.
- You can talk to anyone in class. If you know the answer, help someone else in class.
- Each quiz must be by at least two and at most three people. Most quizzes should be by three people, so find someone to talk to. Put your name on one quiz only.

Question (25 points).

(a) Given the following schedule:

$$r_2(L)\ r_1(X)\ r_1(Y)\ r_3(Z)\ w_2(X)\ w_1(Y)\ w_3(X)\ r_4(L)\ w_4(Z)\ r_1(Z)\ w_1(K)$$

1. List <u>all conflicts</u> and draw the conflict graph.

2. Discuss whether the schedule is serializable or not and why. If it is serializable, find a serial schedule that is equivalent to it.

Answer here.

(b) You are given the following contents of the log and data pages after a crash. Answer each of the following questions YES/NO/NEI (not enough information), and provide a single sentence explanation of why you gave this answer.

```
LOG:
LSN    LOG ENTRY               PREVLSN
101    T1 update P1 10 20      -
102    T2 update P2 A B        -
103    T2 update P1 20 30      102
104    commit T2
105    T1 update P3 XY ZZ      101

DATA PAGES:
PAGE ID  LSN OF LAST UPDATE
P1          101
P2          102
P3          105
```

1. This schedule is possible under two phase locking.

2. This schedule is possible under strict two phase locking.

3. Steal is used.

4. Force is used.