

My Name: Peter Perfect

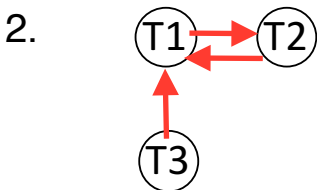
My Class Login: cs186-__ __ __

I. Basics

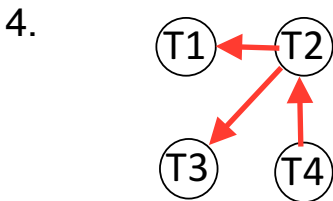
1. C 2. B 3. E 4. A
 5. H 6. F 7. I

II. Concurrency

1. a b c
 d e f ∅



3. a b c d ∅



5. T F
 6. T F

III. Multi granularity Locking

1. T1: IX(Y) T2: IS(Y)
 T3: IS(Y) T4: IX(Y)
 2. T1: IX(B)X(B_3) T3: ∅
 T4: IX(B)
 3. T F

IV. ARIES Recovery

1. a b c
 d e f

2.

TID	Status	LastLSN
1	Running	70
2	Running	80

PID	recLSN
3	70
2	80

3.

TID	Status	LastLSN
1	Aborting	140
2	Committing	150

PID	recLSN
3	70
2	80
1	110

4.

LSN	Record	prevLSN
160	CLR: T1 LSN 110 undoNextLSN: 70	140
170	CLR: T1 LSN 70 undoNextLSN: null	160

5. T F

6. a b c

V. Two Phase Commit

1. a b c
 d e f ∅

2. a b ∅

3. Circle all that apply

- a) PREPARE / COMMIT / ABORT
 b) COMMIT / ABORT / END

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4. Before it...

- writes a prepare record
- sends a _____ message
- receives a _____ message

4. C1: A B C D DM
 C2: A B C D DM
 C3: A B C D DM

5. a b c
 d e f ∅

6. a) A B C
 b) A B C

VI. SQL & LINEAR ALGEBRA

1. a b c d
 2. a b c d ∅
 3. a b c d
 4. (a) 8 (b) 3 (c) 2
 (d) 1 (e) 4

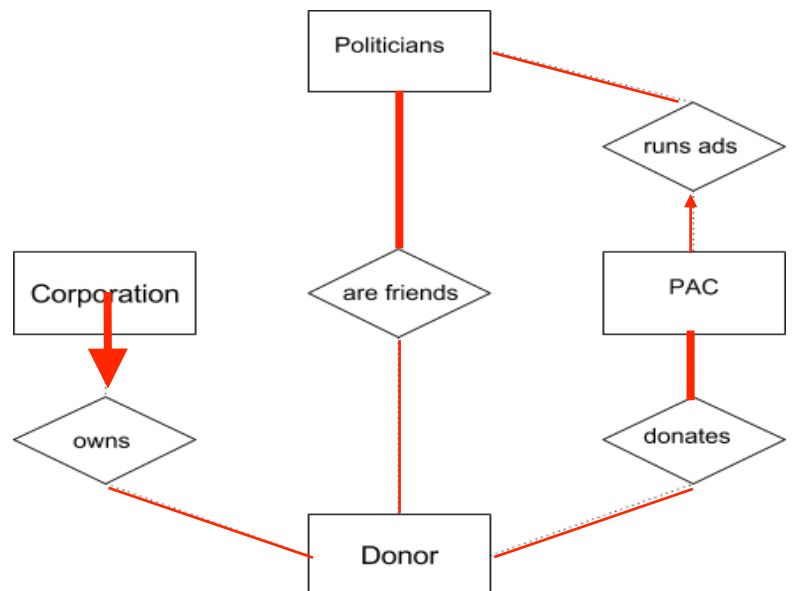
IX. ER Modeling

1. T F
 2. a) a b c d
 b) a b c d
 c) a b c d
 3. a b c d

VII. Spark

1. a b c
 d e f ∅
 2. (a) 6 (b) 2 (c) 4
 (d) 6 (e) 2
 3. a b c d

4. Fill in the ER Diagram:



VIII. Analytics and ML

1. **BUG** a b c
 d e f ∅
 2. a b c
 d e f ∅
 3. 1) A B C
 2) A B C
 3) A B C
 4) A B C

X. FDs & Normalization

1. a b c **BUG** d ∅
 2. a b c d ∅
 3. a b c **BUG** d ∅
 4. a b c d ∅