

R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂

a. The transaction conflicts are:

- i. RW 3→1 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂
- ii. WR 1→2 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂
- iii. WW 2→3 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂
- iv. RW 2→3 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂

b. Not conflict serializable due to the cycle { T₁, T₂, T₃ }

c. The following conflicts can be used to eliminate view equivalent serial schedules:

- i. RW 3→1 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂
- ii. WR 1→2 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂
- iii. WW 2→3 R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂

Remember that one must still check view serializability of any candidate view serialization.

Not view serializable for the following reasons in each serialization:

- 1. 1, 2, 3: Initial(C)/W₁(C) R₃(C)
- 2. 1, 3, 2: Initial(C)/W₁(C) R₃(C), W₃(A)/W₂(A) final value
- 3. 2, 1, 3: Initial(C)/W₁(C) R₃(C), W₁(C)/Initial(C) R₂(C)
- 4. 2, 3, 1: W₁(C)/Initial(C) R₂(C)
- 5. 3, 1, 2: W₃(A)/W₂(A) final value
- 6. 3, 2, 1: W₁(C)/Initial(C) R₂(C), W₃(A)/W₂(A) final value

d. Recoverable schedule

e. Cascadeless schedule

f. Not strict due to:

- i. R₃(C), R₃(B), R₁(C), W₁(C), W₂(A), C₁, R₂(A), R₂(C), W₃(A), C₃, C₂

R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃

a. The transaction conflicts are:

- i. RW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- ii. RW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- iii. WW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- iv. WW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- v. RW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- vi. RW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- vii. WR 2→1 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- viii. WW 3→2 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- ix. WW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃

b. Not conflict serializable due to the cycle { T₂, T₃ }

c. The following conflicts can be used to eliminate view equivalent serial schedules:

- i. WW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- ii. WR 2→1 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- iii. WW 2→3 R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃

Remember that one must still check view serializability of any candidate view serialization.

View serializable with serial order(s):

- i. 2, 1, 3
- ii. 2, 3, 1

d. Recoverable schedule

e. Cascadeless schedule

f. Not strict due to:

- i. R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃
- ii. R₂(A), W₂(A), R₃(C), R₂(A), W₂(B), R₂(B), W₃(A), W₂(A), R₁(C), C₂, R₁(B), W₃(A), C₁, C₃