

$$A \rightarrow B$$

$$B \rightarrow A$$

$$B \rightarrow C$$

$$CD \rightarrow F$$



BCNF分解. Candidate key. AD. BD

① 从中间开始. (常用).

$$R_1 = (C, D, E)$$

$$F_1 = CD \rightarrow E$$

$$R'_1 = (ABCD)$$

$$F'_1 = A \rightarrow B, B \rightarrow A, B \rightarrow C$$

非BCNF 也不是 candidate key

$$R_2 = (BC)$$

$$F_2 = B \rightarrow C$$

$$R'_2 = (ABD)$$

$$F'_2 = A \rightarrow B, B \rightarrow A$$

非BCNF.

$$R_3 = (AB)$$

$$F_3 = A \rightarrow B, B \rightarrow A.$$

$$R'_3 = (AD)$$

$$F'_3 = \emptyset$$

R'_3 非BCNF.

$$R_4 = AD.$$

$$F_4 = \emptyset$$

$$R_1 = (CDE)$$

$$F_1 = (D \rightarrow E)$$

$$A \rightarrow B$$

$$R_2 = (BC)$$

$$F_2 = (B \rightarrow C)$$

$$B \rightarrow A$$

$$R_3 = (AB)$$

$$F_3 = (A \rightarrow B \quad B \rightarrow A)$$

$$B \rightarrow C$$

$$R_4 = (AD)$$

$$F_4 = \phi$$

$$CD \rightarrow E$$

均可验证. 该组保持

② 从 BC 开始.

$$R_1 = (BC)$$

$$F_1 = (B \rightarrow C)$$

$$R_1' = (ABDE)$$

$$F_1' = (A \rightarrow B, B \rightarrow A)$$

$$R_2 = (AB)$$

$$F_2 = (A \rightarrow B, B \rightarrow A)$$

$$R_2' = (ADE)$$

$$F_2' = (AD \rightarrow E)$$

$$R_3 = (ADE)$$

$$F_3 = (AD \rightarrow E)$$

$$R_1 = (BC)$$

$$F_1 = (B \rightarrow C)$$

$$R_2 = (AB)$$

$$F_2 = (A \rightarrow B, B \rightarrow A)$$

$$R_3 = (ADE)$$

$$F_3 = (AD \rightarrow E)$$

非该组保持.

② 从 $A \rightarrow B$ 开始.

$$R_1 = (AB)$$

$$F_1 = A \rightarrow B \quad B \rightarrow C$$

$$R_1' = ACDE.$$

$$F_1' = A \rightarrow C. \quad CD \rightarrow E.$$

$$R_2 = (AC).$$

$$F_2 = A \rightarrow C.$$

$$R_2' = (ADE)$$

$$F_2' = AD \rightarrow E$$

$$R_3 = ADE.$$

$$F_3 = AD \rightarrow E$$

$$R_1 = (AB)$$

$$F_1 = A \rightarrow B \quad B \rightarrow C$$

$$R_2 = (AC).$$

$$F_2 = A \rightarrow C.$$

非极

$$R_3 = ADE.$$

$$F_3 = AD \rightarrow E$$