

12/4/2024

$$F = \{AB \rightarrow C, AB \rightarrow D, B \rightarrow C, BC \rightarrow D, CD \rightarrow EF, E \rightarrow F\}$$

Step 1 $\rightarrow AB \rightarrow C, AB \rightarrow D, B \rightarrow C, BC \rightarrow D, CD \rightarrow E, CD \rightarrow F$
 $E \rightarrow F$

Step 2 \rightarrow

$AB \rightarrow C$ x	$AB \rightarrow D$ x	$B \rightarrow C$ ✓	$BC \rightarrow D$ ✓	$CD \rightarrow E$ ✓
	$CD \rightarrow F$ x		$E \rightarrow F$ ✓	

$$\{B \rightarrow C, B \rightarrow D, CD \rightarrow E, E \rightarrow F\}$$

Step 3 \rightarrow

$$\{B \rightarrow C, B \rightarrow D, CD \rightarrow E, E \rightarrow F\}$$

$$\{B \rightarrow CD, CD \rightarrow E, E \rightarrow F\}$$

Minimal Cover

$$F = \{A \rightarrow BC, CD \rightarrow E, E \rightarrow C, D \rightarrow AEH, ABH \rightarrow BD, DH \rightarrow BC\}$$

Step 1 \Rightarrow

$$\{A \rightarrow B, A \rightarrow C, CD \rightarrow E, E \rightarrow C, D \rightarrow A, D \rightarrow E, D \rightarrow H, ABH \rightarrow B, ABH \rightarrow D, DH \rightarrow B, DH \rightarrow C\}$$

x \rightarrow trivial dup

Step 2 \Rightarrow

$$\{A \rightarrow B, A \rightarrow C, E \rightarrow C, D \rightarrow A, D \rightarrow E, D \rightarrow H, ABH \rightarrow D\}$$

$ABH \rightarrow D$
 \downarrow
 $AH \rightarrow D$

Step 3 $\rightarrow A \rightarrow B, A \rightarrow C, E \rightarrow C, D \rightarrow A, D \rightarrow E, D \rightarrow H,$

$$AH \rightarrow D$$

$$\{A \rightarrow BC, E \rightarrow C, D \rightarrow AEH, AH \rightarrow D\}$$

Minimal Cover

$$F = \{A \rightarrow B, B \rightarrow C, A \rightarrow C, AB \rightarrow B, AB \rightarrow C, AC \rightarrow B\}$$

Step 1 $\rightarrow A \rightarrow B, B \rightarrow C, A \rightarrow C, AB \rightarrow C, AC \rightarrow B$

Step 2 $\rightarrow B \rightarrow C, A \rightarrow C, AC \rightarrow B$

Step 3 \Rightarrow

$$B \rightarrow C, A \rightarrow C, A \rightarrow B$$

$$B \rightarrow C, A \rightarrow B, B \rightarrow C$$

Minimal Cover