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$R = \{ABCDEFG$

$F = \{AB \to C, \ C \to A, \ BC \to D, \ ACD \to B$

$\qquad D \to EG, BE \to C, CG \to BD, CE \to A, CE \to G\}$

Step 1 Split	Step 2: Remove
1) $AB \to C$	1) $AB \to C$
2) $C \to A$	2) $C \to A$
3) $BC \to D$	3) $BC \to D$
4) $ACD \to B$	4) $CD \to B$
5) $D \to E$	5) $D \to E$
6) $D \to G$	6) $D \to G$
7) $BE \to C$	7) $BE \to C$
8) $CG \to B$	8) $CG \to B$
9) $CG \to D$	9) $CG \to D$
10) $CE \to A$	10) $CE \to A$
11) $CE \to G$	11) $CE \to G$

Step 3

	$X \to A$	$X^+_{\{X \to A\}}$	
1)	$AB \to C$	AB	yes
2)	$C \to A$	C	yes
3)	$BC \to D$	BCA	yes
4)	$CD \to B$	$CDEGAB$	NO
5)	$D \to E$	DG	yes
6)	$D \to G$	DE	yes
7)	$BE \to C$	BE	yes
8)	$CG \to B$	$CGADEB$	NO
9)	$CG \to D$	CGA	yes
10)	$CE \to A$	$CEAG$	NO
11)	$CE \to G$	CEA	yes

Step 4	F^+ (min)	Relations
1) $AB \rightarrow C$	$AB \rightarrow C$	$R_1 = ABC$
2) $C \rightarrow A$	$C \rightarrow A$	$R_2 = CA$
3) $BC \rightarrow D$	$BC \rightarrow D$	$R_3 = BCD$
4) $D \rightarrow E$	$D \rightarrow EG$	$R_4 = DEG$
5) $D \rightarrow G$	$BE \rightarrow C$	$R_5 = BEC$
6) $BE \rightarrow C$	$CG \rightarrow D$	$R_6 = CGD$
7) $CG \rightarrow D$	$CE \rightarrow G$	$R_7 = CEG$
8) $CE \rightarrow G$		

3NF Decomposition

F	ABCDEG	

$\underline{FAB^+}$ $\}$ This is a candidate key
$\overline{FABCDEG}$ $\}$

Add candidate Key and removed subsets

$R_1 = ABC$
$R_2 = BCD$
$R_3 = DEG$
$R_4 = BEC$
$R_5 = CGD$
$R_6 = CEG$
$R_7 = FAB$