Task 1.
Case number one (2)
1. Indicate all the BCNF violations.
Possible canidate keys!
AB, AC
or
AB, AD
the AB gives us C,D,E
the AC gives us B,D,E
the AD gives us B,C,E
AB is not determinants of any of the FD and AB is a canidiate key therefore it violates BCNF.

2. Decompose the relations (BCNF)
D,B,E gives us $B \rightarrow D$, $D \rightarrow E$.
C,D gives us $C \rightarrow D$
A,C gives us none and $A,B \rightarrow C$ *FD's is lost.*
Splitting into three Tuples
R1(C,D)
R2(B,D,E)
R3(A,B,C)
Now we have $A,B \rightarrow C$

3.Indicate all 3NF violations.
Doesn't fulfill 2NF therefore it violates 3NF
the attributes should have FD on a primary key to fulfill 2NF

4.Decompose the relations (3NF)
We have
$AB \rightarrow C$ $D \rightarrow B$ $D \rightarrow E$ $C \rightarrow D$
To split these into into three tuples
R1 C,D which gives us $C \rightarrow D$
R2 B,D,E which gives us $D \rightarrow B$; $D \rightarrow E$
R3 A,B,C which gives us the missing FD AB-C