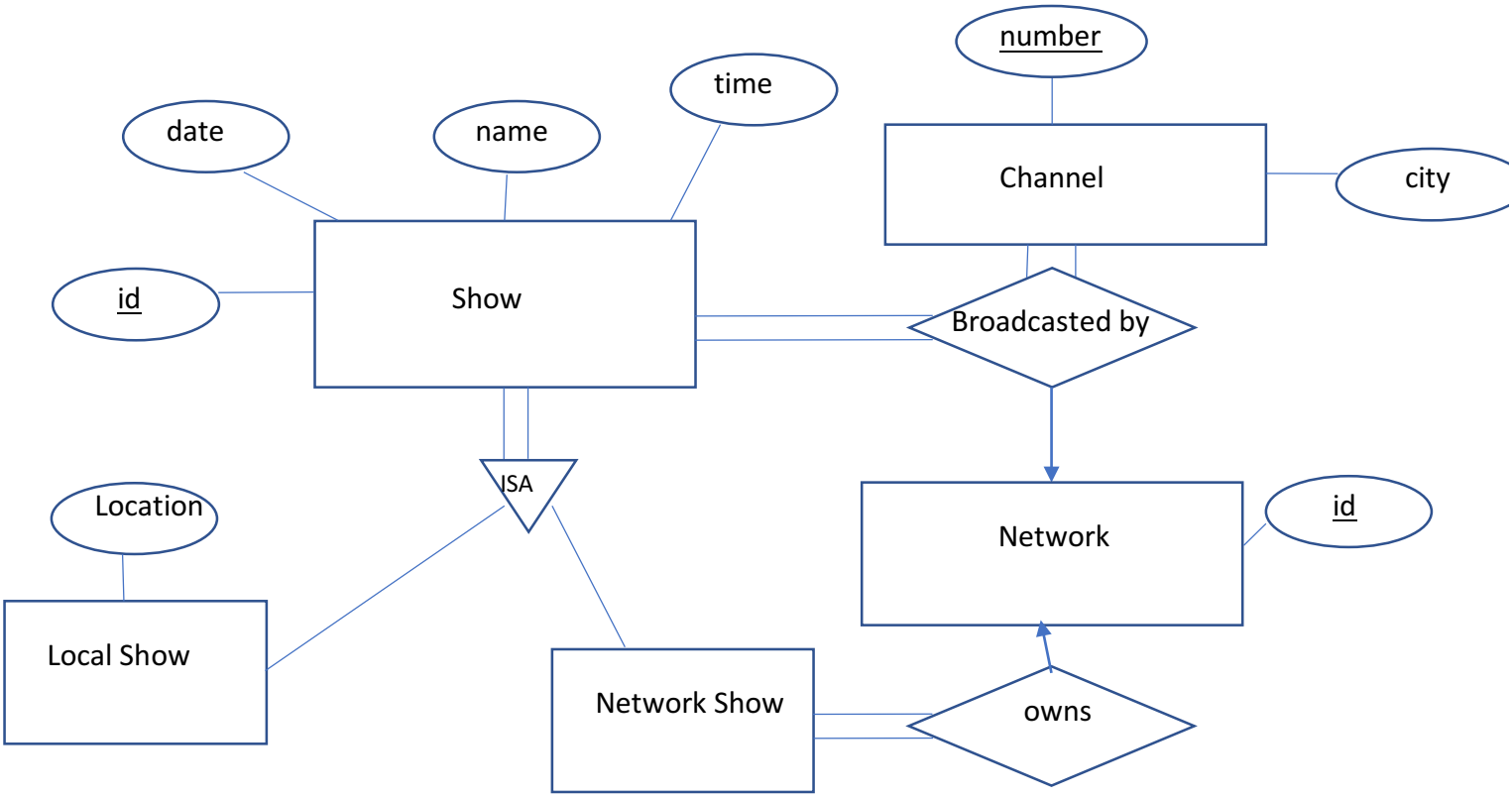
1)



2)
Parts(number)
Assembly(number, cost)
ComposedOf(Parts.number, Assembly.number, quantity)

3)
union of r1 & r2 is r
closure of A is {ABCDE} hence it is the key for (A D E).
Therefore decomposition is lossless.

4) C -> A, C -> B, A -> B

5)
a) Yes, A is dependent on E, BC is dependent on A, D is dependent on B. So the closure of E is R.
b) Yes, the closure of BC is R. (B -> D, CD -> E, E -> A)

6)
AF key
A -> BC not bcnf
ABCDE AF
C->E not bcnf
CE ABCD **AF**
B->D not bcnf
BD ABC

The final set of relations are (C E), (A F), (B D), (A B C)
