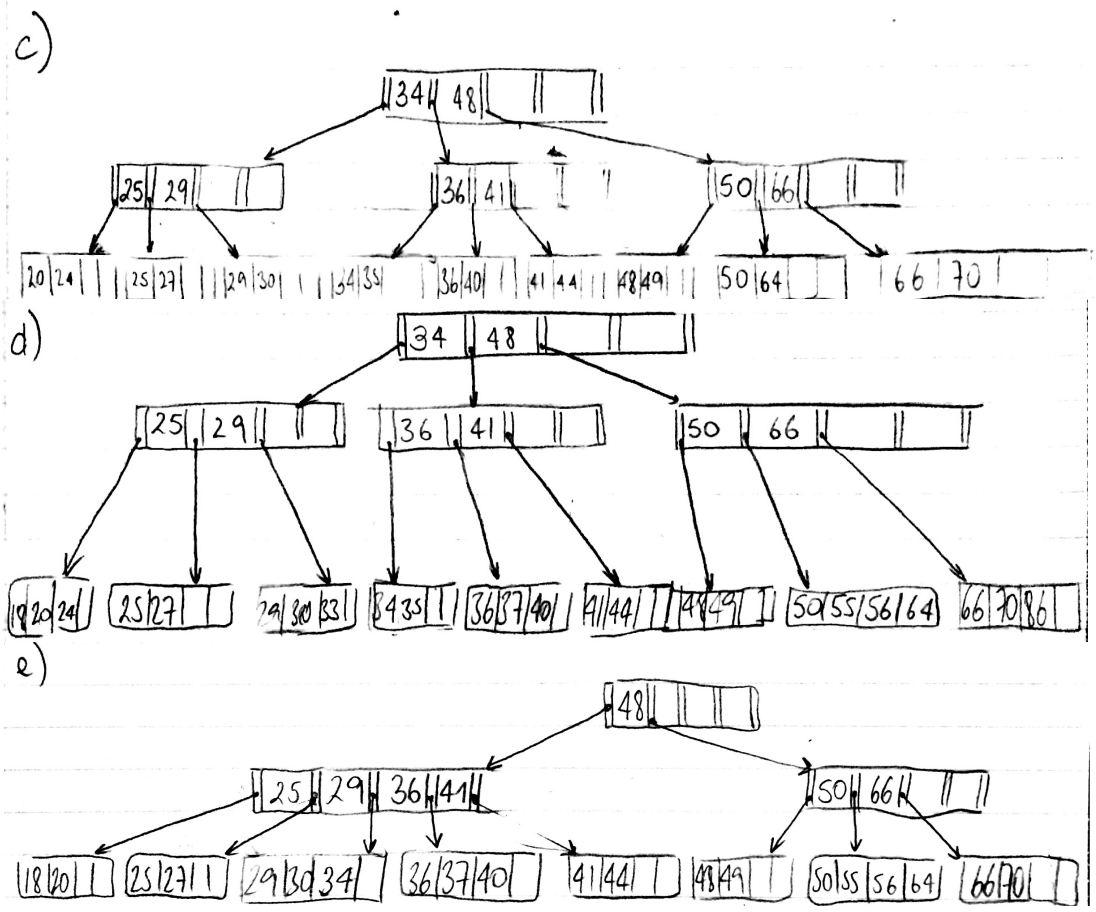
Question 1

a. Insertion anomaly prevents the insertion of data because of mandatory fields. For example, we cannot add an artist unless they have made an album.
b. This relation is not in 2NF since artist name, age and country columns can be uniquely identified by a part of the primary key. Also, an album name can be identified using only an AlbumID.
c. The relation isn't in 3NF either because it's not in 2NF.
d. The relation cannot be in BCNF because it isn't in 3NF since it isn't in 2NF.
e. Armstrong's axioms are used to infer functional dependencies. AB → H → B or AB → F → G → I
f. In minimal cover, we try to reduce the reuse of a FD in another one. For example, if we had AB → CDE, ABF → G ⇛ AB → CDE & EF → G
g. A lossless decomposition is when a relation is split into two tables and their join gives us the original table.

Question 2

a. k=1 [Joe - 100 - Tex Mex - 20]
b. k=20 [Name - RestID - Style - Rating]
[OtherPersonWhoIs20 - RestID - Style - Rating] …



I forgot to add the * on the last row to indicate an insertion

f. Hash indexing is not a suitable solution when performing range searches because for example we might still have an pointer in the index whose data was removed.