CA119 & CA218 Assessment 4

Functional Dependencies & Normalisation

Part 1: Functional Dependencies [40 marks]

Using your schema you designed for assignment 3, populate 3 tables with 10-15 rows.

Perform a JOIN operation, with no more than 7 attributes ... at least 1 from each table.

Paste the JOIN table into the answerbook (it needs a least 10 rows to make this assignment as easy as possible for you). It should be very clear and easy to read.

[Hint: Excel is possibly the best way to do this or you could create a table with Workbench and type in the values]

Question 1A

Using the algorithm from slide 6.31 list all **potential** functional dependencies with 1 and 2 determinants (left-hand side has 1 attribute or 2 attributes).

In other words A → B or A,B → C or A → B,C etc. (all combinations you must test).

Question 1B

List 3 **actual** FDs for this relation from your list compiled in 1B. They must have 3 different determinants.

Part 2: Normalisation [50 marks]

Question 2A.

What normal form is your table? Explain how you came to this conclusion.

Question 2B

Identify the Partial Dependencies in your table. Explain the composition necessary to resolve this problem.

Question 2C

Identify the Transitive Dependencies in your table. Explain the composition necessary to resolve this problem.

(If there are none, you get 0 marks, so edit your table to provide this type of dependency and then answer the question. It's ok to edit your original table and then paste this new table into the answerbook.)

Part 3: Evidence of Team Work (10 marks)

Write a brief description of each partner's contribution to the overall project. Explain how you divided the workload.

Did both partners make roughly equal contribution (60-40 is roughly equal!)?

If not and you both agree: provide the % breakdown for each partner.