Com S 363 Homework 2 Part 1

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2) Design B has a better design for reducing redundancy in the database. Since Design B groups attributes together based on functional dependencies. By doing this it creates different tables (e.g. venues()) which reduces redundancy as there would only be one distinct item for each table but in design A you could have to references to the same item (e.g. venue\_id, venue\_location) in their table. This helps with insertion anomalies since venue\_id -> location. This prevents anomalies in the database if a certain venue were to be updated it would update in the one location and then the other tables have foreign key references to that venue. In design A venue\_id at line 2 could be updated but there is a chance that a venue with the same venue\_id as line 2 on some other line would miss the update. Design B is also better with deletion anomalies since it uses a references to the different tables (grouped attributes) when the reference is deleted it will be removed everywhere but in Design A there is a chance a venue could be missed due to redundancy.