Student ID: 46564602 Name: Ford Tang Score: / 100 CS122A HW3

A. **Order Status & Fees [25pts]**

(a) O_ID -> O_dt_time, O_ID -> O_amnt, O-amnt -> O_fee, O_status_code -> O_status_text, (O_ID, O_status_code) - > O_status_time

(b)

bc 1> Yes, single attribute in each column.

bc 2> No, non-prime attributes are partially dependent

bc 3> No, since table is not in 2NF.

(c) Move O_fee to order table. Remove O_dt_time and O_amnt, since order table has that information. split O_status_code and O_status_text to it's own table
Order_Status should only have O_ID, O_status_code, and O_status_time Table and is now in BCNF.
No Non-prime attributes are partially dependent or transitive.

B. **Cuisine [25pts]**

(a) R_ID -> R_name, R_ID -> R_address, R_ID -> Other Fields..., R_ID -> R_cuisine

(b)

bc 1> No, there are multiple entries in the R_cuisine column.

bc 2> No, since the table is not 1NF compliant.

bc 3> No, since the table is not 2NF compliant.

(c) We can add a R_cuisine2 column to accept a second type of cuisine.
This will make the table BCNF since there are no transitive and partial compliant functional dependencies.

C. **Last Transfer [25pts]**

(a) R_ID -> R_name, R_ID -> R_address, R_ID -> Other Fields..., R_ID - > R_last_transfer_date

(b)

bc 1> Yes, since each column only has 1 entry type.

bc 2> Yes, since there are no partial functional dependencies.

bc 3> Yes, since there are no transitive functional dependencies.

(c) The Table is already in BCNF form and does not need to be normalized.

D. **Review [25pts]**

(a) C_ID -> C_nickname, (C_ID, R_ID) -> R_rating_stars, (C_ID, R_ID) -> R_comment

(b)

bc 1> Yes, it is in 1NF since each column has only one data entry.

bc 2> No, since C_nickname, and R_ID is partially dependent.

bc 3> No, since the table is not in 2NF.

(c) C_ID and C_nickname should be placed into another table.
The review table should then be C_ID, R_ID, R_rating_stars and R_comment.
This will make the table BCNF.