CS338 Project Proposal
Dieu Hoa Nguyen
Chris Brogly
Option A: Database Design Project

Topic 1: Waterloo restaurants' customer ratings on online order application Doordash

This is a database that contains a total of 294 restaurants in the Waterloo area appearing on Doordash up to June 13, 2020. The database will also update on which restaurants are closed or not registered on the application anymore, the locations that these places ship to, and most importantly the current customer ratings for both the shipper services and the quality of the restaurants as a whole and on each order specifically. The ratings will be useful in finding the n-top restaurants due to customer preferences, as well as reviewing the performance of these restaurants and shippers on this application.

There will be around 8 tables: 1 table for the information of all restaurants appearing on Doordash, 1 zip code tables tracking all zip codes that restaurants can ship to. Data for these two tables will be collected manually from the official Doordash website: https://www.doordash.com/en-US. Other tables are 1 table with all information of shippers registered with Doordash, 1 table for all promotion and discount, 1 table of last orders from customers, and 1 final table including all ratings, 1 cuisine table. These tables are generated randomly through suggested open sources, with Sprawner as a preference for generating names and other personal information.

4 potential tables with insert statements and 3 sample entries:

1. Restaurant table:
   List of all restaurants in the Waterloo area on Doordash. The primary key is ResID. Data types for main attributes in the table:
   ResID: TEXT
   Name: TEXT
   Phone Number: TEXT
   Address: TEXT
   Website: TEXT
   Category: TEXT
   Status: TEXT
   Shipping: TEXT
   Ratings: REAL

	ResID	Name	Phone Number	Address	Website	Category	Status	Shipping	Res_Rate
Entry 1	#0001	The Poke Box	(519) 954-0363	55 King St North	thepokebox.com	Salads, Sushi, Hawaiian, Asian	Open	DD	4.7
Entry 2	#0002	Burger King	(519) 884-4426	Unit 1a, 150 University Ave West	burgerking.ca	Burger, Chicken, Fastfood	Closed	DD	4.5

Entry 3	#0003	Taco Farm	(519) 208-1300	8 Erb St West	tacofarm.ca	Mexican, Tacos, Fried Chicken	Open	Own	4.9

- insert into Restaurant values("#0001", "The Poke Box", "(519) 954-0363", "55 King St North", "thepokebox.com", "Salads, Sushi, Hawaiian, Asian", "Open", "DD", 4.7)
- insert into Restaurant values("#0002", "Burger King", "(519) 884-4426", "Unit 1a, 150 University Ave West", "burgerking.ca", "Burger, Chicken, Fastfood", "Closed", "DD", 4.5)
- insert into Restaurants values("#0003", "Taco Farm", "(519) 208-1300", "8 Erb St West", "tacofarm.ca", "Mexican, Tacos, Fried Chicken", "Open", "Own", 4.9)

2. Ratings table:
   Table of all merged ratings (ratings on specific orders, on restaurants, on shippers and final ratings from all separate ratings. The primary key is Final_ID. Data types:
   Final_ID: TEXT
   OrderID: INTEGER
   ResID: TEXT
   ShipID: INTEGER
   Ship_Rate: INTEGER
   Res_Rate: INTEGER
   Order_Rate: REAL

	Final_ID	OrderID	ResID	ShipID	Ship_Rate	Res_Rate	Order_Rate
Entry 1	A10000	10000	#0001	300	4	5	4.7
Entry 2	A10001	10001	#0001	301	5	3	4.3
Entry 3	A10002	10002	#0002	300	3	4	3.8

- insert into Ratings values("A10000", 10000, "#0001", 300, 4, 5, 4.7)
- insert into Ratings values("A10001", 10001, "#0001", 301, 5, 3, 4.3)
- insert into Ratings values("A10002", 10002, "#0002", 300, 3, 4, 3.8)

3. Shipper table:
   List of all personal information of shippers registered with Doordash, and thus when assigned to partner with a restaurant, the restaurant will have the Shipping values to be "DD". The primary key is ShipID. Data types:
   ShipID: INTEGER
   Name: TEXT
   Phone Number: TEXT
   Vehicle: TEXT
   Ship_Rate: REAL

	ShipID	Name	Phone Number	Vehicle	Ship_Rate
Entry 1	300	Obi Teigen	(519) 354-8682	Bike	3.9
Entry 2	301	Thomas Amerson	(519) 166-7426	Toyota	4.2
Entry 3	302	Huiwang Li	(519) 890-5001	Bike	4.5

- insert into Shipper values(300, "Obi Teigen", "(519) 354-8682", "Bike", 3.9)
- insert into Shipper values(301, "Thomas Amerson", "(519) 166-7426", "Toyota", 4.2)
- insert into Shipper values(302, "Huiwang Li", "(519) 890-5001", "Bike", 4.5)

4. Categories table:
   List of all categories of dishes on Doordash. The primary key is CatID. Data types of attributes in the table:
   CatId: TEXT
   Category: TEXT

	CatId	Category
Entry 1	#01	Vegan
Entry 2	#02	Japanese
Entry 3	#03	Street Food

- insert into Categories values("#01", "Vegan")
- insert into Categories values("#02", "Japanese")
- insert into Categories values("#03", "Street Food")

Topic 2: Bookings of interview rooms in the Tatham Centre for different uses

This is a database that tracks all the bookings that a partner can make with the Tatham Centre regarding their spaces. Bookings may have statuses of "In Use", "Reserved", "Cancelled", and "Finished" so that the administrative of the centre will have better idea of how to make uses of empty spaces and keep track of bookings.

There will be around 5 tables: 1 table with all the information of bookings, 1 table of reasons for reserving spaces, 1 table for information of employers reserving rooms, 1 table of different types of users of reserved rooms, and 1 table of student information making reservations for study spaces. All information will be generated randomly, including unique names and Id, from suggested open sources, with a preference of Sprawner.

4 potential tables with insert statements and 3 sample entries:

1. Booking type table:
   List of uses of each booking. The primary key is BookingType_ID. Data types:
   BookingType_ID: INTEGER
   BookingType: TEXT

	BookingType_Id	Booking type
Entry 1	310	Employer Information session
Entry 2	311	Co-op interviews
Entry 3	312	Study

- insert into Booking type values(310, "Employer Information session")
- insert into Booking type values(311, "Co-op interviews")
- insert into Booking type values(312, "Study")

2. Employer table:
   List of all employers registered with the university to book spaces in Tathem Centre. The primary key is Emp_ID. Data types:

Emp_ID: INTEGER
Employer: TEXT
Phone Number: TEXT
Email: TEXT
Ratings: REAL

	Emp_ID	Employer	Phone Number	Email	Ratings
Entry 1	700	Royal Bank of Canada	(519) 354-8682	humanresources@rbc.ca	8.7
Entry 2	701	Loblaw Digital	(519) 166-7426	digital@loblaw.ca	9.2
Entry 3	702	Canada Life	(519) 890-5001	hrdepartment@calife.ca	8.8

- insert into Employer values(700, “Royal Bank of Canada”, “(519) 354-8682”, humnresources@rbc.ca, 8.7)
- insert into Employer values(701, “Loblaw Digital”, “(519) 166-7426”, digital@loblaw.ca, 8.7)
- insert into Employer values(702, “Canada Life”, “(519) 890-5001”, hrdepartment@rbc.ca, 8.7)

3. User type table:
   List of categories of users that book empty rooms in the centre with time of the year that they are allowed to make bookings. The primary key is UserType_Id. Data types:
   UserType_ID: INTEGER
   User Type: TEXT
   Time: TEXT

	UserType_Id	User type	Time
Entry 1	11	Student	January, May, September
Entry 2	12	Employer	interview round
Entry 3	13	Residence Staff	evening

- insert into Customer type values (11, “Student”, “January, May, Septemberq”)
- insert into Customer type values (12, “Employer”, “interview round”)
- insert into Customer type values (13, “Residence Staff”, “evening”)

4. Bookings table:
   List of all bookings for empty rooms in the Tathem Centre. The primary key is BookID. Data types:
   BookID: INTEGER
   User: TEXT
   Reasons: TEXT
   Time Frame: TEXT
   Status: TEXT

	BookID	User	Reasons	Time Frame	Status
Entry 1	10001	Student	Studying	19-01-2020 16:30-18:30	In Use
Entry 2	10002	Residence Staff	Halloween party	21-10-2020 18:30-21:30	Cancelled
Entry 3	10003	Employer	Information Session	14-11-2020 9:30-10:30	Reserved

- insert into Bookings values(10001, “Student”, “Studying”, “19-01-2020 16:30-18:30”, “In Use”)
- insert into Bookings values(10002, “Residence Staff”, “Halloween party”, “21-10-2020 18:30-21:30”, “Cancelled”)

- insert into Bookings values(10003, “Employer”, “Information Session”, “14-11-2020 9:30-10:30”, “Reserved”)

Notes: All sample entries are made up on the spot. Data will be collected more carefully and more up to date for the submission the official project