Project 2: Uber Competitor Database

In this project, you will design, implement, and test a database for an uber competitor/clone.

In your **design**, you will need to determine

a) necessary information to store (using second page as *suggestions*)
b) an E/R diagram to construct (using MS Visio or any similar *tool*)
c) business reports to produce (using at least FOUR *views*)
d) business logic to incorporate into the design (using several *triggers and constraints*)
e) security levels to establish (using *scripts* for password assignments, roles and encryptions)
f) performance and efficiency improvements to apply (using at least TWO *stored procedures* and TWO *functions*)

In your **implementation**, you will need to

a) determine the tables, columns, primary keys, datatypes, nullabilities, and relationships.
b) normalize your design into its 3rd Normal Form.
c) address potential integrity and security issues.

In your **testing**, you will need to

a) populate your database with test data (about 5 rows in each table)
b) produce about 5 reports (please use also your views)
c) demonstrate its reliability through several complex scenarios

Please your typed report as a single file (.doc or .pdf) on Blackboard.

Your report should include following sections:

1. [5] Cover page: a descriptive title, a short abstract, and your information
2. [50] Design: your introduction, design considerations and choices, and E/R diagrams
3. [10] Implementation: source codes with your comments, and screenshots of your design
4. [10] Testing: testcases and screenshots with your comments
5. [5] Conclusions: your project analysis, and your remarks on this project

All reports that satisfy all the following basic requirements will have a base score of 20 points. The maximum points deducted for noncompliance is indicated in parentheses.

1. General report guidelines followed, i.e. sections labeled, pages numbered [10]
2. Report adheres to basic standards of grammar and spelling [10]

Business problem:

Your job is to create a DB for an uber competitor. The following is the information that the DB needs to store.

Customers

- name
- home address
- stored credit cards
- user name
- email
- phone numbers (home, cell, business)
- active/inactive
- date of last trip taken
- number of trips taken this year
- ratings
    - date when review is left
    - driver that left it
    - score
    - text
    - for which trip was the review for

Trips/Reservations

- date when it was booked
- pick-up time
- drop-off time
- completed (yes/no)
- address where to pick up
- address where to drop off
- number of people
- number of bags
- customer notes
- driver notes
- customer
- driver
- cost paid
- tip
- credit card information of the card that paid the bill

Drivers

- name
- status (possible options – inactive, off work, working – available, working – with a fare)
- date of birth
- when did the driver start with our company
- driver license information
    - state
    - date of issue
    - date of expiry
    - license number
- insurance information
    - company
    - policy number
    - date of issue
    - date if expiry
- SSN
- home address
- bank account information (bank name, routing & account numbers, type of account (checking, savings))
- records of payments that the driver was paid (dates & the amount as well as a record of all pickups)
- customer ratings
    - text
    - score
    - date when left
    - customer that left it
    - for which trip was this review for
- driver's car information
    - make
    - model
    - year
    - color
    - car class (regular, luxury, SUV)
    - number of passengers it can fit
    - number of bags it can fit