Summative Project – Functional Scope

1. The system will be used only by employees of the car rental company, it is an offline system, at the company storefront. It is used to allow walk-in customers to be able to both borrow and return their cars.
2. Each user signs in with an assigned user id and password. Each user can (CRUD) own personal details as well as change own password.
3. A user with ADMIN Role will be initialized in the database and the access given to the system owner. Only users assigned ADMIN Role can create, modify users, grant and revoke user Roles . A user can be assigned zero (no access), one, or more Roles.
4. Each business operation requires specific Roles. Only users granted those Roles can perform the business operation.
5. Creation and deletion of Roles, as well as association of Roles to specific business operations is an application program maintenance task (DBA) . Association of Roles to specific users is however a business operation that requires ADMIN Role.
6. Access to record deletion is granted only to user with ADMIN or MANAGER Role. User deletion is only allowed for ADMIN.
7. Business Operations by Roles:
   1. DBA:
      1. Creation and deletion of roles
         1. assigning of business operations to specific roles.
      2. CRUD of car statuses
         1. assigning of business operations to specific car statuses
   2. ALL: for all users.
      1. Log-in
      2. View non-sensitive own personal details. (user table)
      3. Change own password.
   3. ADMIN: for administrators
      1. Create, modify, suspend, delete users (CRUD). Suspended users are barred from log-in. (enabled *true/false*)
      2. Grant/Revoke Roles to users (Changing the roles/ Roles).
      3. Record deletion
   4. MANAGER:
      1. Manage Cars (CRUD)
      2. Maintain daily flat rate for Cars (price).
      3. Record deletion
   5. EMPLOYEE: for front desk who serve customers
      1. Create, Modify customers (CRUD).
      2. Search for available cars base on customer specifications. Because there is no forward booking, candidate cars are always retrieved from current READY status cars (search or display only available cars).
      3. All hiring starts from now. Customer do not need to provide an expected return date/time. Hire fee is computed for each candidate car when the car is returned. Customer will decide when to return the car. Hire fee will be generated upon car return to determine length of time rented.
      4. In all cases, the hire details will be created/updated and an invoice generated on web page. As a result, one Invoice may be associated with one or more Hiring records (multiple cars).
      5. A Car must be returned to the EMPLOYEE for car status change from HIRED to UNHIRED, during the car return.
      6. Each hiring record must register the date time and staff id who serves the customer, for the renting out as well as the returning/renewal.
8. Creation and deletion of car Statuses, as well as association of car Status to business operations is an application program maintenance task (DBA). Association of car Statuses to specific Car is however a business operation that requires relevant Roles (MANAGER).
9. Testability and the use of system clock:
   1. The application should refer to the clock whenever necessary, and especially for starting and ending time for each hiring.
10. Keep these future enhancements in view.
11. New fee schedules.
12. Customer self-service, registration and car booking.
13. If manager changed car rates halfway when customer has already rented, he will end up paying the updated price when he returns it, this is unfair (fixed temporarily with only can update Car details when car is returned)
14. If manager delete car before car is returned, to prevent this, only can delete after car is returned)
15. If car is deleted, current way is to cascade, so records will be deleted, see if there is a way to keep them in archives

Fee Schedule:

Hiring Fee computation:

1. Each car is assigned a flat daily rate by MANAGER.