1. Project Title and Group members
2. E-R Diagram with 5 to 10 tables and their relationships

// admin diagram? How to add admin ? to user ? Or to

1. List of possible transactions (add, change, remove data, retrieve data), and questions (read stored data)

// Admin table

E-R Table

* 1. User table - mengyao
     1. Add user info (admin)
     2. Update point balance for user (admin)
     3. Change user email address (user)
     4. Get user info on web app, show personal information. (admin)
     5. Add right to post to local\_coupon ? (admin)
  2. Online\_Coupon - Jingyi
     1. Add coupon info (admin)
     2. Retrieve coupon info on web app （admin）
  3. Local\_Coupon-Kai Luo
     1. Add coupon info (user)
     2. Update coupon info (for instance, error correction)(user)
     3. Retrieve coupon info on web app (admin)
  4. Clicks\_1 weihan
     1. Add new tuple (U\_ID,C\_ID, Date)(admin)
  5. Clicks\_2 weihan
     1. Add new tuple (U\_ID,C\_ID, Date)(admin)
  6. Post

**Script:**

Mengyu - ER Diagram

This is our ER Diagram, we have three entities and three relationships. For each entity and relationship, we are gonna to build a table. When users click online coupons, the action gonna affects two tables, users and online coupon table. The point\_balance attribute of user table will changed after the action.and one more row will be inserted into clicks\_1 table. When users post a local coupons, the post action will affect three tales, users table pont\_balance will be changed, and one more row will be inserted into post table and local coupon table. Clicking local coupon is the same as clicking online coupon, just apply different method of calculating user points.

Mengyao - User Table

This slide shows an example of the user table in tabular format. Since this table stores info for the users, one obvious transaction is to add/insert user info to this table when a new user account is registered. And in case the user changes email address, there will also be a query to update the field. As illustrated before, a user’s point balance is tied to behaviors such as posting a local coupon, we will have a transaction that will update the point balance for the user once the specific behavior is triggered. Lastly, a user normally can view his or her profile on a web page. A query to display user data is also necessary for our application.

Jingyi - Online\_Coupon Table

This table here is the online coupon table. It includes coupons’ discount information, effective date, expiration date, product name, company name, type and link. We can insert new coupon information to this table, and can also delete the expired coupons. Once parts of coupons’ information change, like discount percent increases or expiration date is prolonged, we can update those information. If users want to browse the coupons based on specific needs, for instance, a user only want to glance over coupons for beauty, there will be corresponding queries to retrieve those information.

Kai Luo - Local\_Coupon Table(copy from Jingyi)

This table here is the local coupon table. It includes coupons’ ID, title, type, description like online coupon table, the difference is that local coupon contains address and photo link.

Just like online coupon table, the users can add local coupon information and they can also update, delete expired coupon information, and they can also search for local coupon information.

Weihan Lyu

These tables are used to record the interaction between users and coupons. All these tables have same attributes, as you can see, cid, uid, and date. For the clicks1 and clicks2, because one user may click same coupon at different times, so the primary key consists of all three attributes, but one local coupon can just be posted by one user, though there may be two coupons with same content, they are still different coupons with different cid, so, the primary key of post should consist of cid and uid. By these information, we can know the users’ actions and then can provide browse records to users. Also, according to the number of views of the coupons in a certain period, we can rank the coupons by popularity. And based on these pieces of information, we can calculate the points that users may spend or obtain by their actions.