

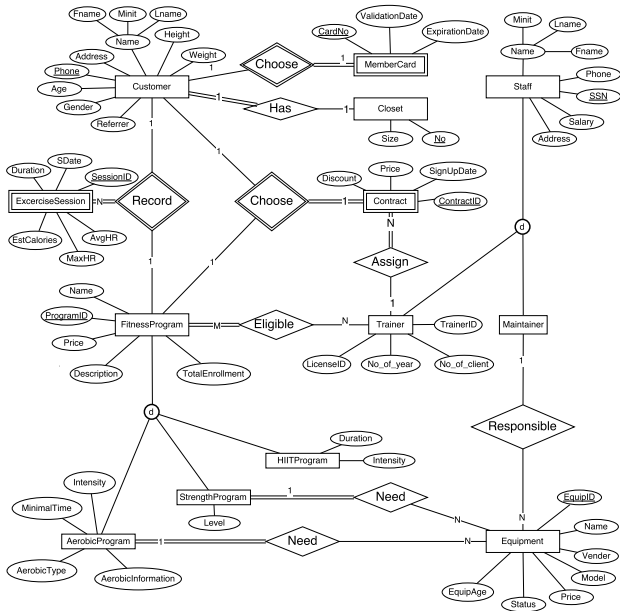
# Final Project Presentation

Hanlin He   Kai Kang

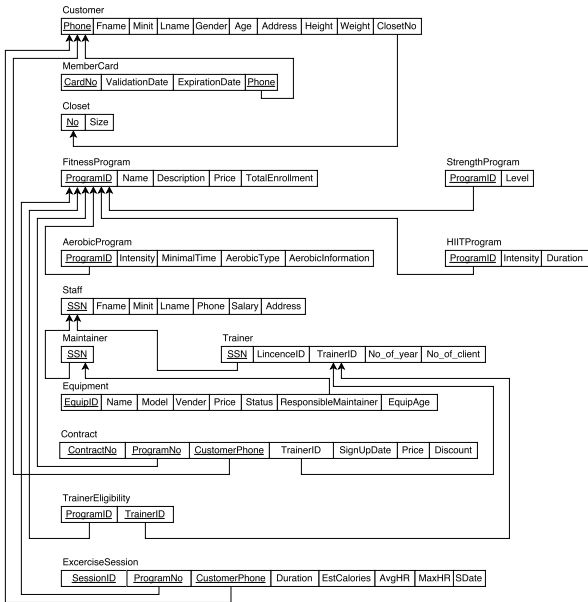
University of Texas at Dallas

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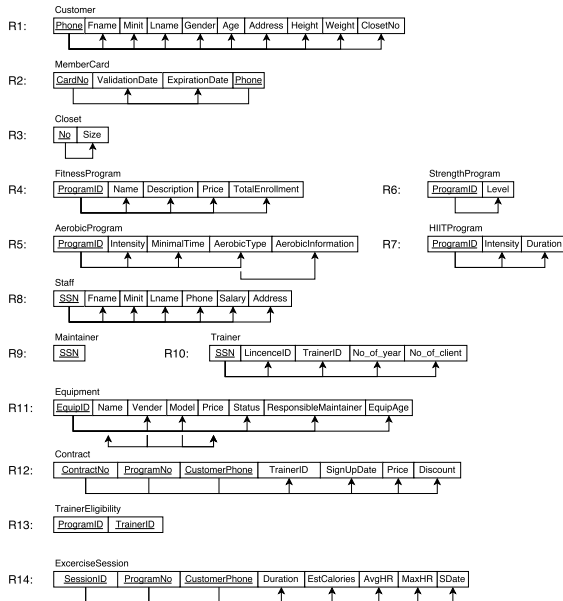
# EER Diagram



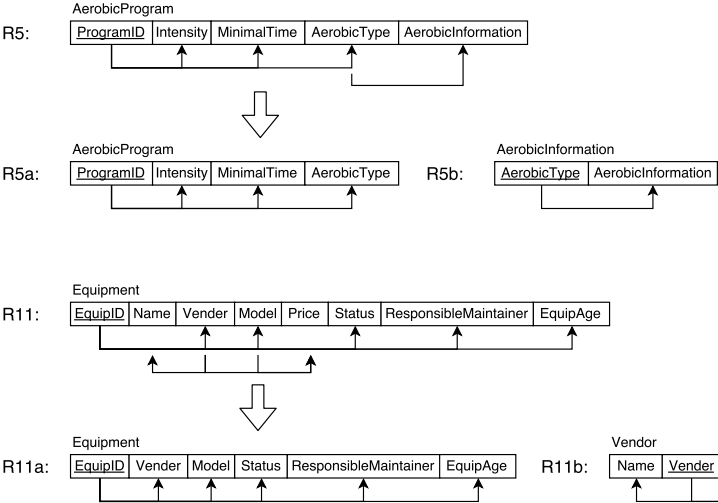
## Relational Schema after Mapping



# Functional Dependencies



# Normalization



# Update Total Enrollment of Program

Each time a record was added to the `CONTRACT` table, the *TotalEnrollment* in table `FITNESSPROGRAM` of the particular program should add 1.

The trigger is defined as follow:

---

```
1 CREATE OR REPLACE TRIGGER addTotalEnrollmentTrigger
2   AFTER INSERT ON CONTRACT
3     FOR EACH ROW
4 BEGIN
5   UPDATE FITNESSPROGRAM
6     SET TOTALENROLLMENT = TOTALENROLLMENT + 1
7     WHERE PROGRAMID = :new.PROGRAMNO;
8   UPDATE TRAINER
9     SET NO_OF_CLIENTS = NO_OF_CLIENTS + 1
10    WHERE TRAINERID = :new.TRAINERID;
11 END ;/
```

---

# Trigger: Log All the Changes about Customer

Each time a record was added/updated/deleted in CUSTOMER table, record the modification in CUSTOMER\_LOG table.

The trigger is defined as follow:

```
1 CREATE TABLE Customer_Log ( log_date DATE, action VARCHAR2(50),
2   old_Phone VARCHAR2(10), old_Gender CHAR, old_Age NUMBER,
3   old_Height FLOAT, old_Weight FLOAT, old_ClosetNo VARCHAR2(10),
4   new_Phone VARCHAR2(10), new_Gender CHAR, new_Age NUMBER,
5   new_Height FLOAT, new_Weight FLOAT, new_ClosetNo VARCHAR2(10)
6 );
7
8 CREATE OR REPLACE TRIGGER customerLogTrigger
9   AFTER INSERT OR UPDATE OR DELETE ON CUSTOMER
10  FOR EACH ROW
11  DECLARE
12    log_action Customer_Log.action%TYPE;
13  BEGIN
14    IF INSERTING THEN
15      log_action := 'Insert';
16      INSERT INTO Customer_Log
17        VALUES (SYSDATE, log_action, null, null, null, null, null,
18                :new.PHONE, :new.GENDER, :new.AGE,
19                :new.HEIGHT, :new.WEIGHT, :new.CLOSETNO );
20    ELSIF UPDATING THEN
21      log_action := 'Update';
22      INSERT INTO Customer_Log
23        VALUES (SYSDATE, log_action,
24                :old.PHONE, :old.GENDER, :old.AGE,
25                :old.HEIGHT, :old.WEIGHT, :old.CLOSETNO,
26                :new.PHONE, :new.GENDER, :new.AGE,
27                :new.HEIGHT, :new.WEIGHT, :new.CLOSETNO );
28    ELSIF DELETING THEN
29      log_action := 'Delete';
30      INSERT INTO Customer_Log
31        VALUES (SYSDATE, log_action,
32                :old.PHONE, :old.GENDER, :old.AGE,
33                :old.HEIGHT, :old.WEIGHT, :old.CLOSETNO,
34                null, null, null, null, null, null );
35    ELSE
36      DBMS_OUTPUT.PUT_LINE('This code is not reachable.');
```

```
37 END IF;
38 END;/
```

# Trigger: Update Total Enrollment of Program

---

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```

---