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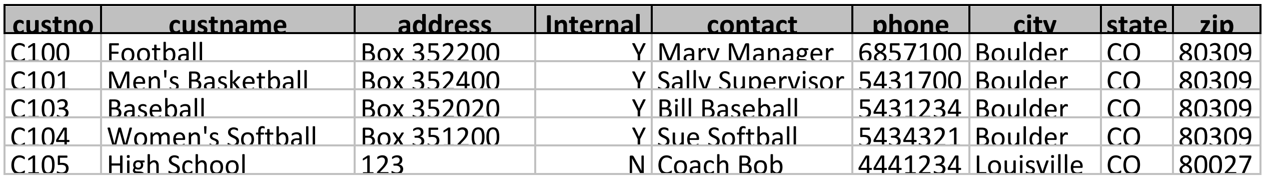
Mata Kuliah : Data Warehouse dan Bisnis Intelligence

TUGAS 1

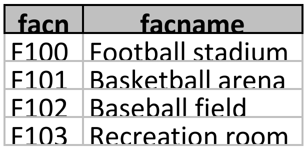
The problems use the *Customer*, *Facility*, and *Location* tables of the intercollegiate athletic database. The *Customer* table contains clients who initiate event requests. The *Facility* table contains available facilities. The *Location* table contains several locations inside facilities. The primary keys of the tables are *CustNo* for *Customer*, *FacNo* for *Facility*, and *LocNo* for *Location*.

Customer



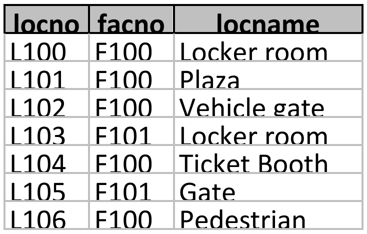
custno	custname	address	Internal	contact	phone	city	state	zip
C100	Football	Box 352200	Y	Mary Manager	6857100	Boulder	CO	80309
C101	Men's Basketball	Box 352400	Y	Sally Supervisor	5431700	Boulder	CO	80309
C103	Baseball	Box 352020	Y	Bill Baseball	5431234	Boulder	CO	80309
C104	Women's Softball	Box 351200	Y	Sue Softball	5434321	Boulder	CO	80309
C105	High School	123	N	Coach Bob	4441234	Louisville	CO	80027

Facility



facn	facname
F100	Football stadium
F101	Basketball arena
F102	Baseball field
F103	Recreation room

Location



locno	facno	locname
L100	F100	Locker room
L101	F100	Plaza
L102	F100	Vehicle gate
L103	F101	Locker room
L104	F100	Ticket Booth
L105	F101	Gate
L106	F100	Pedestrian

1. Write a CREATE TABLE statement for the *Customer* table. Choose data types appropriate for the DBMS used in your course. All columns are required (not null).

   Jawab:

```
CREATE TABLE Customer (
      custno VARCHAR(11) NOT NULL,
      custname VARCHAR(50) NOT NULL,
      address VARCHAR(100) NOT NULL,
      Internal CHAR(1) NOT NULL,
      contact VARCHAR(30) NOT NULL,
      phone VARCHAR(12) NOT NULL,
      city VARCHAR(20) NOT NULL,
      state VARCHAR(2) NOT NULL,
      zip VARCHAR(10) NOT NULL,
      CONSTRAINT CustomerPk PRIMARY KEY (custno) );
```

2. Write a CREATE TABLE statement for the *Facility* table. Choose data types appropriate for the DBMS used in your course. All columns are required (not null).

   Jawab:

```
CREATE TABLE Facility (
      facno VARCHAR(11) NOT NULL,
      facname VARCHAR(50) NOT NULL,
      CONSTRAINT FacilityPk PRIMARY KEY (facno) );
```

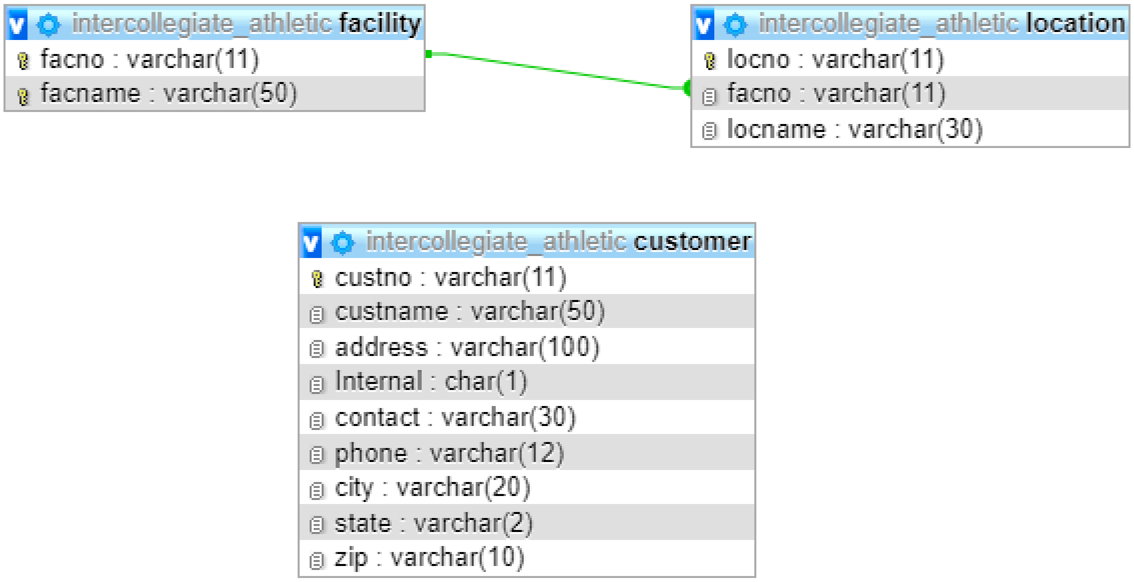
3. Write a CREATE TABLE statement for the *Location* table. Choose data types appropriate for the DBMS used in your course. *LocName* column is required (not null).

Jawab:

```
CREATE TABLE Location (
        locno VARCHAR(11) NOT NULL,
        facno VARCHAR(11) NOT NULL,
        locname VARCHAR(30) NOT NULL,
        CONSTRAINT LocationPk PRIMARY KEY (locno));
```

4. Identify the foreign key(s) and 1-M relationship(s) among the *Customer*, *Facility*, and *Location* tables. For each relationship, identify the parent table and the child table.

Jawab: Terdapat 1-M relasi pada tabel Facility dan Location. Pada tabel Facility terdapat *facno* sebagai *Primary Key* (PK) dan pada tabel Location terdapat *facno* sebagai *Foreign Key* (FK).



intercollegiate_athletic **facility**
facno : varchar(11)
facname : varchar(50)

intercollegiate_athletic **location**
locno : varchar(11)
facno : varchar(11)
locname : varchar(30)

intercollegiate_athletic **customer**
custno : varchar(11)
custname : varchar(50)
address : varchar(100)
Internal : char(1)
contact : varchar(30)
phone : varchar(12)
city : varchar(20)
state : varchar(2)
zip : varchar(10)

5. Extend your CREATE TABLE statement from problem (3) with referential integrity constraints.

   Jawab:

```
CREATE TABLE Location (
      locno VARCHAR(11) NOT NULL,
      facno VARCHAR(11),
      locname VARCHAR(30) NOT NULL,
      CONSTRAINT LocationPk PRIMARY KEY (locno),
      CONSTRAINT FacNo_Fk FOREIGN KEY (facno) REFERENCES
FACILITY (facno) );
```

6. From examination of the sample data and your common understanding of scheduling and operation of events, are null values allowed for the foreign key in the *Location* table? Why or why not? Extend the CREATE TABLE statement in problem (5) to enforce the null value restrictions if any.

   Jawab:

```
CREATE TABLE Location (
      locno VARCHAR(11) NOT NULL,
      facno VARCHAR(11) NOT NULL,
      locname VARCHAR(30) NOT NULL,
      CONSTRAINT LocationPk PRIMARY KEY (locno),
      CONSTRAINT FacNo_Fk FOREIGN KEY (facno) REFERENCES
FACILITY (facno) );
```

7. Extend your CREATE TABLE statement for the *Facility* table (problem 2) with a unique constraint for *FacName*. Use an external named constraint clause for the unique constraint.

   Jawab:

```
CREATE TABLE Facility (
     facno VARCHAR(11) NOT NULL,
     facname VARCHAR(50) NOT NULL,
     CONSTRAINT FacilityPK PRIMARY KEY (facno),
     CONSTRAINT FacName_Unique UNIQUE (facname) );
```