Databases Submission 2 Finalise Group Work

Name: Owen Kane

Student Number: C13383511

Lecturer: Patricia O’Byrne

Course: BSc. In Computer Science

Code: DT228\_3 ; Group: B

Module: Databases 2

Word Count (minimum ): n/a

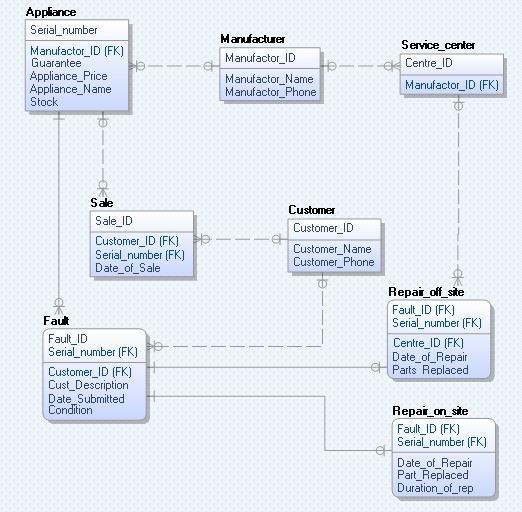
Submission Date: 30/10/15

Case Study: Edmunds Electrics

Team Mates : Owen Kane

Owen Grogan

Jihoon Lee

Given the feedback from the initial stage of the assignment, this is our current iteration of the ERD. 

The case study was regarded in keen detail and deemed amongst the group that all attributes and relationships had been duly noted and catered for.

Now we will examine how the group will behave in terms role assignment in terms of handling a function specification. Given that the to-be developed transaction is to be complex enough to handle functions and procedures, the tables/entities in the ERD need to be assigned accordingly.

A note on functions/procedures. Functions are computed values that proffer no permanent environmental changes to the SQL server, that is there can be no selects or inserts. A value can be returned but not altered.

A procedure is used to take some action. But use a function to return some value. A function may be called from sql query but a procedure can't.

Roles

Owen Grogan will take in a repair of faulty item (“Garry”)

Functionality: Garry thing in a repair

Process:

1. Retrieve and enter the customer id()
2. Pull data on any appliances bought by that customer
3. From the User end: Choose the faulty appliance from the resultant data
4. Again from the user end: then have the fault sheet filled in with the details of the faulty appliance.
5. Once any necessary details are collated return any relevant details to the customer.

Necessary Permissions:

GRANT select on Customer, Sale, Appliance to <ogrogan>;

GRANT select, insert on Fault, Reapir\_Off\_Site, Repair\_On\_Site to <ogrogan>;

Owen Kane will carry out a stock update (“Edmund”)

Functionality: Edmund re-stocking a manufacturer’s appliance

Process:

1. System retrieve all manufacturers.
2. Edmund selects a manufacturer
3. System shows all that manufactures appliances
4. Edmund selects the appliance he is re-stocking
5. Edmund UPDATES that appliance entry in the table

Necessary Permissions:

GRANT select on manufacturer to okane;

GRANT select, update on appliance to okane;

Jihoon Lee will oversee a sales transaction (“Edmund”)

Functionality: Edmund selling an appliance

Process:

1. Get appliance and Serial\_number.
2. Enter Customer\_ID, Customer\_Name and Customer\_Phone.
3. Set Sale\_ID.
4. Get Customer\_ID from Customer and Serial\_ID form Appliance.
5. Enter Date\_of\_Sale.

Necessary Permissions:

GRANT select on Customer, Sale to jlee;

GRANT select, insert on Appliance to jlee;

Appendix

Here is the full SQL incorporating alter, drops, creates, constraints, inserts, grants and commit.

--SET SCHEMA TO GROUP

ALTER SESSION SET CURRENT\_SCHEMA = DT2283GROUP\_T;

-- Drop Tables

DROP TABLE Sale CASCADE CONSTRAINTS PURGE;

DROP TABLE Repair\_on\_site CASCADE CONSTRAINTS PURGE;

DROP TABLE Repair\_off\_site CASCADE CONSTRAINTS PURGE;

DROP TABLE Fault CASCADE CONSTRAINTS PURGE;

DROP TABLE Appliance CASCADE CONSTRAINTS PURGE;

DROP TABLE Customer CASCADE CONSTRAINTS PURGE;

DROP TABLE Service\_center CASCADE CONSTRAINTS PURGE;

DROP TABLE Manufacturer CASCADE CONSTRAINTS PURGE;

-- Create table manufacturer

CREATE TABLE Manufacturer

(

Manufactor\_ID NUMBER NOT NULL ,

Manufactor\_Name VARCHAR2(30) NULL ,

Manufactor\_Address VARCHAR2(30) NULL ,

Manufactor\_Phone NUMBER(10) NULL ,

CONSTRAINT Manufacturer\_PK PRIMARY KEY (Manufactor\_ID)

);

-- Create table service\_enter

CREATE TABLE Service\_center

(

Centre\_ID NUMBER NOT NULL ,

Manufactor\_ID NUMBER(7) NULL ,

Centre\_Name VARCHAR2(30) NULL ,

Centre\_Address VARCHAR2(30) NULL ,

CONSTRAINT Service\_center\_PK PRIMARY KEY (Centre\_ID),

CONSTRAINT service\_center\_manufactuer\_FK FOREIGN KEY (Manufactor\_ID) REFERENCES Manufacturer (Manufactor\_ID)

);

-- Create table customer

CREATE TABLE Customer

(

Customer\_ID NUMBER NOT NULL ,

Customer\_Name VARCHAR2(30) NULL ,

Customer\_Address VARCHAR2(30) NULL ,

Customer\_Phone NUMBER(10) NULL ,

CONSTRAINT Customer\_PK PRIMARY KEY (Customer\_ID)

);

-- Create table appliance

CREATE TABLE Appliance

(

Serial\_number NUMBER NOT NULL ,

Manufactor\_ID NUMBER NULL ,

Guarantee NUMBER NULL ,

Appliance\_Price NUMBER(7,2) NULL ,

Appliance\_Name VARCHAR2(30) NULL ,

Stock NUMBER NULL ,

CONSTRAINT Appliance\_PK PRIMARY KEY (Serial\_number),

CONSTRAINT appliance\_manufacturer\_FK FOREIGN KEY (Manufactor\_ID) REFERENCES Manufacturer (Manufactor\_ID)

);

-- Create table fault

CREATE TABLE Fault

(

Fault\_ID NUMBER NOT NULL ,

Customer\_ID NUMBER NULL ,

Serial\_number NUMBER NOT NULL ,

Cust\_Description VARCHAR2(30) NULL ,

Date\_Submitted DATE NULL ,

Condition VARCHAR2(30) NULL ,

CONSTRAINT Fault\_PK PRIMARY KEY (Fault\_ID,Serial\_number),

CONSTRAINT fault\_customer FOREIGN KEY (Customer\_ID) REFERENCES Customer (Customer\_ID),

CONSTRAINT fault\_appliance\_FK FOREIGN KEY (Serial\_number) REFERENCES Appliance (Serial\_number)

);

-- Create table repair off site

CREATE TABLE Repair\_off\_site

(

Centre\_ID NUMBER NULL ,

Fault\_ID NUMBER NOT NULL ,

Serial\_number NUMBER NOT NULL ,

Date\_of\_Repair DATE NULL ,

Parts\_Replaced VARCHAR2(30) NULL ,

CONSTRAINT Repair\_off\_site\_PK PRIMARY KEY (Fault\_ID,Serial\_number),

CONSTRAINT Repair\_service\_center\_FK FOREIGN KEY (Centre\_ID) REFERENCES Service\_center (Centre\_ID),

CONSTRAINT Repair\_off\_fault\_FK FOREIGN KEY (Fault\_ID, Serial\_number) REFERENCES Fault (Fault\_ID, Serial\_number)

);

-- Create table repair on site

CREATE TABLE Repair\_on\_site

(

Fault\_ID NUMBER NOT NULL ,

Serial\_number NUMBER NOT NULL ,

Date\_of\_Repair DATE NULL ,

Part\_Replaced VARCHAR2(30) NULL ,

Duration NUMBER NULL ,

CONSTRAINT Repair\_on\_site\_PK PRIMARY KEY (Fault\_ID,Serial\_number),

CONSTRAINT Repair\_on\_Fault\_FK FOREIGN KEY (Fault\_ID, Serial\_number) REFERENCES Fault (Fault\_ID, Serial\_number)

);

-- Create table sale

CREATE TABLE Sale

(

Sale\_ID NUMBER NOT NULL ,

Customer\_ID NUMBER NULL ,

Serial\_number NUMBER(7) NULL ,

Date\_of\_Sale DATE NULL ,

CONSTRAINT Sale\_PK PRIMARY KEY (Sale\_ID),

CONSTRAINT sale\_customer\_FK FOREIGN KEY (Customer\_ID) REFERENCES Customer (Customer\_ID),

CONSTRAINT sale\_appliance\_FK FOREIGN KEY (Serial\_number) REFERENCES Appliance (Serial\_number)

);

commit;

-- Insert Into Customer

INSERT INTO CUSTOMER (CUSTOMER\_ID,CUSTOMER\_NAME,CUSTOMER\_PHONE)

VALUES (001,'Mason Cole',0981018877);

INSERT INTO CUSTOMER (CUSTOMER\_ID,CUSTOMER\_NAME,CUSTOMER\_PHONE)

VALUES (002,'Chris Garneau',8886541122);

INSERT INTO CUSTOMER (CUSTOMER\_ID,CUSTOMER\_NAME,CUSTOMER\_PHONE)

VALUES (003,'Jennifer Watson',894015975);

INSERT INTO CUSTOMER (CUSTOMER\_ID,CUSTOMER\_NAME,CUSTOMER\_PHONE)

VALUES (004,'James Bourne',0861018877);

INSERT INTO CUSTOMER (CUSTOMER\_ID,CUSTOMER\_NAME,CUSTOMER\_PHONE)

VALUES (005,'Mary Sands',018787654);

-- Insert in manufacturer

INSERT INTO manufacturer (MANUFACTOR\_ID,MANUFACTOR\_NAME, MANUFACTOR\_PHONE)

VALUES (001,'Nintendo',018789898);

INSERT INTO manufacturer (MANUFACTOR\_ID,MANUFACTOR\_NAME, MANUFACTOR\_PHONE)

VALUES (002,'Sony',013435566);

INSERT INTO manufacturer (MANUFACTOR\_ID,MANUFACTOR\_NAME, MANUFACTOR\_PHONE)

VALUES (003,'Samsung',013432211);

INSERT INTO manufacturer (MANUFACTOR\_ID,MANUFACTOR\_NAME,MANUFACTOR\_PHONE)

VALUES (004,'Breville',018989898);

INSERT INTO manufacturer (MANUFACTOR\_ID,MANUFACTOR\_NAME,MANUFACTOR\_PHONE)

VALUES (005,'Microsoft',016768854);

-- insert into appliance

INSERT INTO appliance (SERIAL\_NUMBER,MANUFACTOR\_ID,GUARANTEE,APPLIANCE\_PRICE,APPLIANCE\_NAME,STOCK)

VALUES (001,001,12,150.00,'Wii Console',30);

INSERT INTO appliance (SERIAL\_NUMBER,MANUFACTOR\_ID,GUARANTEE,APPLIANCE\_PRICE,APPLIANCE\_NAME,STOCK)

VALUES (002,002,36,1200.00,'TV',20);

INSERT INTO appliance (SERIAL\_NUMBER,MANUFACTOR\_ID,GUARANTEE,APPLIANCE\_PRICE,APPLIANCE\_NAME,STOCK)

VALUES (003,003,18,115.00,'Earphones',50);

INSERT INTO appliance (SERIAL\_NUMBER,MANUFACTOR\_ID,GUARANTEE,APPLIANCE\_PRICE,APPLIANCE\_NAME,STOCK)

VALUES (004,004,24,46.00,'Juicer',15);

INSERT INTO appliance (SERIAL\_NUMBER,MANUFACTOR\_ID,GUARANTEE,APPLIANCE\_PRICE,APPLIANCE\_NAME,STOCK)

VALUES (005,005,12,399.00,'Xbox',17);

-- insert into faultID

INSERT INTO FAULT (FAULT\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,CUST\_DESCRIPTION,DATE\_SUBMITTED,CONDITION)

VALUES (1,001,001,'Broken plug','17-JUN-2013','Plug fluse blown');

INSERT INTO FAULT (FAULT\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,CUST\_DESCRIPTION,DATE\_SUBMITTED,CONDITION)

VALUES (2,002,002,'No signal','15-MAY-2013','Receiver damaged');

INSERT INTO FAULT (FAULT\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,CUST\_DESCRIPTION,DATE\_SUBMITTED,CONDITION)

VALUES (3,003,003,'Frayed wire','02-FEB-2013','Wire stripped');

INSERT INTO FAULT (FAULT\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,CUST\_DESCRIPTION,DATE\_SUBMITTED,CONDITION)

VALUES (4,004,004,'Not spinning','10-APR-2013','Dead motor');

INSERT INTO FAULT (FAULT\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,CUST\_DESCRIPTION,DATE\_SUBMITTED,CONDITION)

VALUES (5,005,005,'No connection','21-JAN-2013','Port damaged');

-- insert into sale

INSERT INTO SALE (SALE\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,DATE\_OF\_SALE)

VALUES (01, 001, 001, '19-JUN-2011');

INSERT INTO SALE (SALE\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,DATE\_OF\_SALE)

VALUES (02, 002, 002, '25-JAN-2011');

INSERT INTO SALE (SALE\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,DATE\_OF\_SALE)

VALUES (03, 003, 003, '12-FEB-2011');

INSERT INTO SALE (SALE\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,DATE\_OF\_SALE)

VALUES (04, 004, 004, '22-FEB-2011');

INSERT INTO SALE (SALE\_ID,CUSTOMER\_ID,SERIAL\_NUMBER,DATE\_OF\_SALE)

VALUES (05, 005, 005, '01-MAR-2011');

-- Repair on site

INSERT INTO REPAIR\_ON\_SITE (FAULT\_ID,SERIAL\_NUMBER,DATE\_OF\_REPAIR,PART\_REPLACED,DURATION)

VALUES (1, 001, '5-MAY-13', 'Fuse', 4);

INSERT INTO REPAIR\_ON\_SITE (FAULT\_ID,SERIAL\_NUMBER,DATE\_OF\_REPAIR,PART\_REPLACED,DURATION)

VALUES (2, 002, '30-MAY-13', 'Receiver', 2);

INSERT INTO REPAIR\_ON\_SITE (FAULT\_ID,SERIAL\_NUMBER,DATE\_OF\_REPAIR,PART\_REPLACED,DURATION)

VALUES (3, 003, '12-JAN-13', 'Wire', 4);

-- Service Centre

INSERT INTO service\_center (CENTRE\_ID,MANUFACTOR\_ID,CENTRE\_NAME,CENTRE\_ADDRESS)

VALUES (2, 1, 'O,Connell Repair' , 'Sandyford');

INSERT INTO service\_center (CENTRE\_ID,MANUFACTOR\_ID,CENTRE\_NAME,CENTRE\_ADDRESS)

VALUES (4, 2, 'Pro Repair', 'Navan');

INSERT INTO service\_center (CENTRE\_ID,MANUFACTOR\_ID,CENTRE\_NAME,CENTRE\_ADDRESS)

VALUES (6, 3, 'Drogheda Repair', 'Drogheda');

INSERT INTO service\_center (CENTRE\_ID,MANUFACTOR\_ID,CENTRE\_NAME,CENTRE\_ADDRESS)

VALUES (8, 4, 'Dan Fay Repair', 'Adare');

INSERT INTO service\_center (CENTRE\_ID,MANUFACTOR\_ID,CENTRE\_NAME,CENTRE\_ADDRESS)

VALUES (10, 5, 'Dundrum Repair Centre', 'Dundrum');

-- Repair off site

INSERT INTO repair\_off\_site (FAULT\_ID,SERIAL\_NUMBER,CENTRE\_ID,DATE\_OF\_REPAIR, PARTS\_REPLACED)

VALUES (4, 004, 2,'26-JUL-2015', 'Motor');

INSERT INTO repair\_off\_site (FAULT\_ID,SERIAL\_NUMBER,CENTRE\_ID,DATE\_OF\_REPAIR, PARTS\_REPLACED)

VALUES (5, 005, 4,'02-OCT-2015', 'LAN port’);

--GRANTS

GRANT ALL ON Sale TO okane, jlee;

GRANT ALL ON Repair\_on\_site TO okane, ogrogan;

GRANT ALL ON Repair\_off\_site TO okane, ogrogan;

GRANT ALL ON Fault TO okane, ogrogan;

GRANT ALL ON Appliance TO okane, jlee, ogrogan;

GRANT ALL ON Customer TO okane, jlee;

GRANT ALL ON Service\_center TO okane, ogrogan;

GRANT ALL ON Manufacturer TO okane;

commit;