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/*
 * Creating Tables of Specialty Imports ER Diagram
 */

-- drop table statements in inverse order of creating tables
DROP TABLE prospect;
DROP TABLE servwork;
DROP TABLE servinv;
DROP TABLE invoption;
DROP TABLE saleinv;
DROP TABLE baseoption;
DROP TABLE car;
DROP TABLE employee;
DROP TABLE options;
DROP TABLE customer;

-- drop sequence statements
DROP SEQUENCE saleinv_seq;
DROP SEQUENCE servinv_seq;

-- create table statements
CREATE TABLE customer(
  cname          CHAR(20),
  cstreet        CHAR(20)  CONSTRAINT customer_cstreet_nn NOT NULL,
  ccity          CHAR(20)  CONSTRAINT customer_ccity_nn  NOT NULL,
  cprov          CHAR(20)  CONSTRAINT customer_cprov_nn  NOT NULL,
  cpostal        CHAR(10),
  chphone        CHAR(13),
  cbphone        CHAR(13),
  CONSTRAINT customer_cname_pk PRIMARY KEY (cname)
);

CREATE TABLE options(
  ocode          CHAR(4),
  odesc          CHAR(30),
  ocost          NUMERIC(7, 2),
  olist          NUMBER(7, 2),
  CONSTRAINT options_ocode_pk PRIMARY KEY (ocode)
);

CREATE TABLE employee(
  empname        CHAR(20),
  startdate      DATE  CONSTRAINT employee_startdate_nn NOT NULL,
  manager        CHAR(20),
  commissionrate NUMBER(2, 0),
  title          CHAR(26),
  CONSTRAINT employee_empname_pk PRIMARY KEY (empname),
  CONSTRAINT employee_manager_fk FOREIGN KEY (manager) REFERENCES employee(empname)
);

CREATE TABLE car(
  serial         CHAR(8),
  cname          CHAR(20),
  make           CHAR(10)  CONSTRAINT car_make_nn NOT NULL,
  model          CHAR(8)   CONSTRAINT car_model_nn NOT NULL,
  cyear          CHAR(4)   CONSTRAINT car_cyear_nn NOT NULL,
  color          CHAR(12)  CONSTRAINT car_color_nn NOT NULL,
  trim           CHAR(16)  CONSTRAINT car_trim_nn NOT NULL,
  enginetype     CHAR(10),
  purchinv       CHAR(6),
  purchdate      DATE,
  purchfrom      CHAR(12),
  purchcost      NUMBER(9,2),
  freightcost    NUMBER(9,2),

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totalcost    AS (purchasecost + freightcost),
listprice    NUMBER(9,2),
CONSTRAINT  serial_pk PRIMARY KEY (serial),
CONSTRAINT  car_cname_fk FOREIGN KEY (cname) REFERENCES customer(cname)
);

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CREATE TABLE baseoption(
  serial CHAR(8),
  ocode CHAR(4),
  CONSTRAINT serial_ocode_pk PRIMARY KEY (serial, ocode),
  CONSTRAINT baseoption_serial_fk FOREIGN KEY (serial) REFERENCES car(serial),
  CONSTRAINT baseoption_ocode_fk FOREIGN KEY (ocode) REFERENCES options(ocode)
);

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CREATE TABLE saleinv(
  saleinv CHAR(6),
  cname CHAR(20) CONSTRAINT saleinv_cname_nn NOT NULL,
  salesman CHAR(20) CONSTRAINT saleinv_salesman_nn NOT NULL,
  saledate DATE CONSTRAINT saleinv_saledate_nn NOT NULL,
  serial CHAR(8) CONSTRAINT saleinv_serial_nn NOT NULL,
  totalprice NUMBER(9,2),
  discount NUMBER(8,2),
  net AS (totalprice - discount),
  tax AS (0.13 * (totalprice - discount)),
  licfee NUMBER(6,2),
  commission NUMBER(8,2),
  tradeserial CHAR(8),
  tradeallow NUMBER(9,2),
  fire CHAR(1),
  collision CHAR(1),
  liability CHAR(1),
  property CHAR(1),
  CONSTRAINT saleinv_pk PRIMARY KEY (saleinv),
  CONSTRAINT saleinv_cname_fk FOREIGN KEY (cname) REFERENCES customer(cname),
  CONSTRAINT saleinv_salesman_fk FOREIGN KEY (salesman) REFERENCES employee(empname),
  CONSTRAINT saleinv_serial_fk FOREIGN KEY (serial) REFERENCES car(serial),
  CONSTRAINT saleinv_tradeserial_fk FOREIGN KEY (tradeserial) REFERENCES car(serial),
  CONSTRAINT saleinv_fire_ck CHECK (fire IN ('Y', 'N')),
  CONSTRAINT saleinv_collision_ck CHECK (collision IN ('Y', 'N')),
  CONSTRAINT saleinv_liability_ck CHECK (liability IN ('Y', 'N')),
  CONSTRAINT saleinv_property_ck CHECK (property IN ('Y', 'N')),
  CONSTRAINT saleinv_saledate_ck CHECK (saledate > TO_DATE('01-JAN-1990', 'DD-MON-YYYY'))
);

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CREATE TABLE invoption(
  saleinv CHAR(6),
  ocode CHAR(4),
  saleprice NUMBER(7,2),
  CONSTRAINT saleinv_ocode_uq UNIQUE (saleinv, ocode),
  CONSTRAINT invoption_saleinv_fk FOREIGN KEY (saleinv) REFERENCES saleinv(saleinv),
  CONSTRAINT invoption_ocode_fk FOREIGN KEY (ocode) REFERENCES options(ocode)
);

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CREATE TABLE servinv(
  servinv CHAR(5),
  serdate DATE CONSTRAINT servinv_serdate_nn NOT NULL,
  cname CHAR(20) CONSTRAINT servinv_cname_nn NOT NULL,
  serial CHAR(8) CONSTRAINT servinv_serial_nn NOT NULL,
  partscost NUMBER(7,2),
  laborcost NUMBER(7,2),
  tax AS ((partscost + laborcost) * 0.13),
  totalcost NUMBER(8,2),
  CONSTRAINT servinv_pk PRIMARY KEY (servinv),

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CONSTRAINT servinv_cname_fk FOREIGN KEY (cname) REFERENCES customer(cname),
CONSTRAINT servinv_serial_fk FOREIGN KEY (serial) REFERENCES car(serial)
);

CREATE TABLE servwork(
servinv CHAR(5),
workdesc CHAR(80),
CONSTRAINT servinv_workdesc_pk PRIMARY KEY (servinv, workdesc),
CONSTRAINT servwork_servinv_fk FOREIGN KEY (servinv) REFERENCES servinv(servinv)
);

CREATE TABLE prospect(
cname CHAR(20) CONSTRAINT prospect_cname_nn NOT NULL,
make CHAR(10) CONSTRAINT prospect_make_nn NOT NULL,
model CHAR(8),
cyear CHAR(4),
color CHAR(12),
trim CHAR(16),
ocode CHAR(4) CONSTRAINT prospect_ocode_nn NOT NULL,
CONSTRAINT prospect_comp_uq UNIQUE(cname,make,model,cyear,color,trim,ocode),
CONSTRAINT prospect_cname_fk FOREIGN KEY (cname) REFERENCES customer(cname),
CONSTRAINT prospect_ocode_fk FOREIGN KEY (ocode) REFERENCES options(ocode),
CONSTRAINT prospect_make_ck CHECK (make IN ('ACURA','MERCEDES','LAND ROVER','JAGUAR'))
);

-- create sequence statement
CREATE SEQUENCE saleinv_seq
INCREMENT BY 1
START WITH 1;

CREATE SEQUENCE servinv_seq
INCREMENT BY 1
START WITH 1;

```