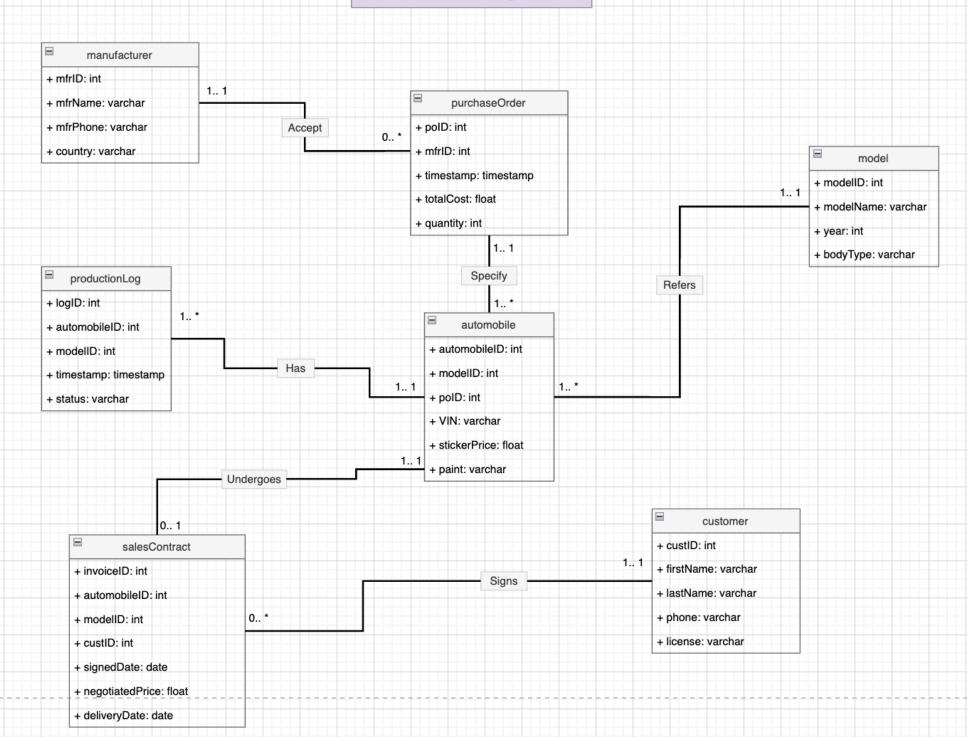
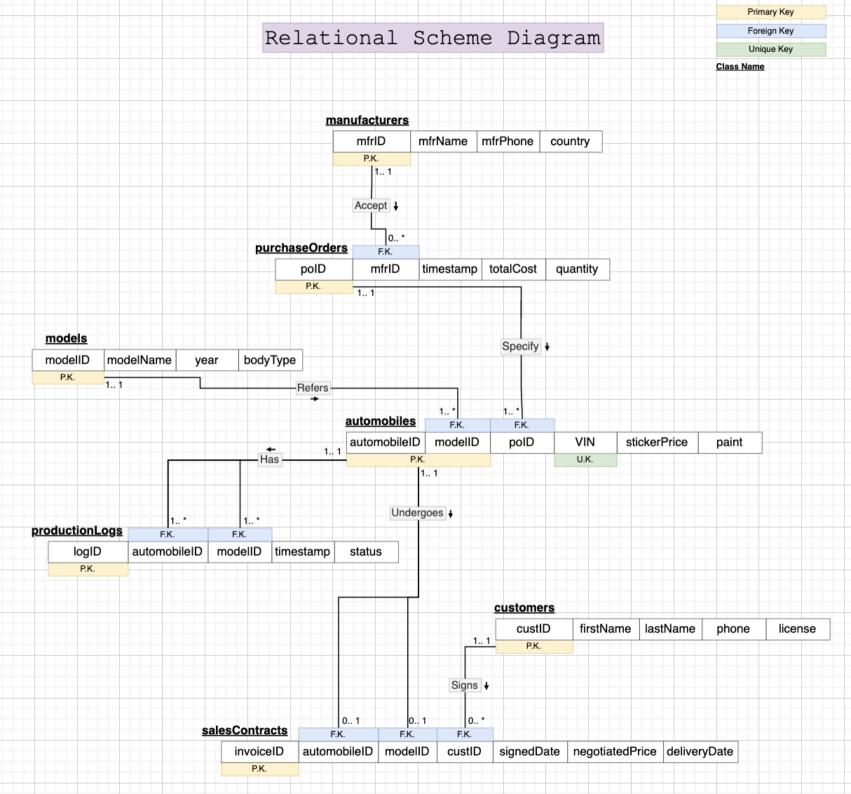
Class Descriptions

- A manufacturer is an agency with a unique id, phone number and location, who accepts a purchase order and produce automobiles as mentioned in purchase orders.
- A customer has a specific customer id who signs sales contracts by providing his/her several information like name, phone number and license information.
- A purchase order with distinctive id signed at specific time describes the information regarding automobile like its total quantity and cost that is supposed to be fulfilled by manufacturer.
- A model with its unique code highlights some characteristics like name, body type and year which helps to build an automobile.
- An automobile with a specific id constructs an entity as per purchase order and with the help of model id to describe some characteristics like VIN that is a unique number, a price, and a color.
- A production log with a unique log id helps to keep track of an automobile by describing a status or a phase at a specific time.
- A sales contract with an invoice number describes the agreement signed by customer on a specific date to purchase an automobile at a negotiated amount which will be delivered on a certain date.

UML Diagram





DDL Commands

```
create table customers
  "custID" integer not null
    constraint customers_pk
       primary key,
  "firstName" varchar not null,
  "lastName" varchar,
  phone
  license varchar
);
alter table customers
  owner to postgres;
create unique index customers_phone_uindex
  on customers (phone);
create table manufacturers
  "mfrID" integer not null
    constraint manufacturers_pk
  "mfrName" varchar not null,
  country varchar,
  "mfrPhone" varchar not null
alter table manufacturers
  owner to postgres;
create unique index manufacturers_mfrphone_uindex
  on manufacturers ("mfrPhone");
```

```
create table "purchaseOrders"
  "poID"
                        not null
    constraint purchaseorders_pk
  "totalCost" double precision not null,
  quantity integer
  "mfrID" integer
                        not null
     constraint purchaseorder_manufacturer_mfrid_fk
       references manufacturers
alter table "purchaseOrders"
  owner to postgres;
create table models
  "modelID" integer not null
    constraint models_pk
       primary key,
  "modelName" varchar not null,
  year
           integer not null,
  "bodyType" varchar not null
);
alter table models
  owner to postgres;
create table automobiles
  "automobileID" integer
  "modelID"
    constraint automobiles_models_modelid_fk
       references models,
  "poID"
             integer
     constraint automobiles_purchaseorders_poid_fk
```

```
references "purchaseOrders",
  vin
  "stickerPrice" double precision not null,
  paint
             varchar
  constraint automobiles_pk
    primary key ("automobileID", "modeIID")
);
alter table automobiles
  owner to postgres;
create unique index automobiles_vin_uindex
  on automobiles (vin);
create unique index automobiles_automobileid_uindex
  on automobiles ("automobileID");
create table "productionLogs"
  "automobileID" integer not null,
  "modelID"
  timestamp not null,
  "logID"
    constraint productionlogs_pk_2
  constraint productionlog_automobiles_automobileid_modelid_fk
     foreign key ("automobileID", "modeIID") references automobiles
alter table "productionLogs"
  owner to postgres;
create unique index productionlogs_logid_uindex
  on "productionLogs" ("logID");
create table "salesContracts"
```

```
"invoiceID" integer
    constraint salescontracts_pk
      primary key,
  "automobileID" integer not null,
  "modelID"
  "custID"
               integer
    constraint salescontracts_customers_custid_fk
       references customers,
  "signedDate" date
  "negotiatedPrice" double precision not null,
  "deliveryDate" date,
  constraint salescontracts_automobiles_automobileid_modelid_fk
    foreign key ("automobileID", "modelID") references automobiles
alter table "salesContracts"
  owner to postgres;
create unique index salescontracts_invoiceid_uindex
  on "salesContracts" ("invoiceID");
create unique index salescontracts_automobileid_uindex
  on "salesContracts" ("automobileID");
```

INSERT Statements

```
-- STEP 1
INSERT INTO manufacturers ("mfrID", "mfrName", country, "mfrPhone")
VALUES (111, 'Toyota', 'Japan', '+1 123-456-7890');
```

```
INSERT INTO models ("modelID", "modelName", year, "bodyType")
VALUES (1, 'Prius', 2022, 'Sedan'), (2, 'Sienna', 2022, 'Minivan');
INSERT INTO "purchaseOrders" ("poID", timestamp, "totalCost", quantity, "mfrID")
VALUES (100, '2022-01-10 13:30:26', 104835, 3, 111);
INSERT INTO automobiles ("automobileID", "modeIID", "poID", vin, "stickerPrice", paint)
VALUES (456, 1, 100, '1GKFK16K0RJ736886', 24625, 'CLASSIC SILVER METALLIC'), (457, 2, 100,
'JH4DA9360PS004131', 34710, 'Sunset Bronze Mica'), (458, 2, 100, '2FMDK3KC7BBA78129', 45500, 'Midnight
Black Metallic');
INSERT INTO "productionLogs" ("automobileID", "modeIID", timestamp, status, "logID")
VALUES (456, 1, '2022-01-01 10:37:12', 'vehicle order received', 1234),
    (457, 2, '2022-01-01 10:39:26', 'vehicle order received', 1235),
    (458, 2, '2022-01-01 10:40:02', 'vehicle order received', 1236),
    (458, 2, '2022-01-03 17:27:04', 'vehicle is being manufactured', 1237),
    (458, 2, '2022-01-08 08:21:12', 'vehicle finished manufacture', 1238),
    (458, 2, '2022-01-09 11:30:56', 'vehicle in en route to dealer', 1239),
    (458, 2, '2022-01-15 09:57:12', 'vehicle delivered to dealer', 1240);
INSERT INTO customers ("custID", "firstName", "lastName", phone, license)
VALUES (28, 'Het', 'Makadia', '+1 940-967-744', 'G0373171');
INSERT INTO "salesContracts" ("invoiceID", "automobileID", "modeIID", "custID", "signedDate", "negotiatedPrice",
"deliveryDate")
VALUES (10011, 458, 2, 28, '2022-01-17', 45500, '2022-01-16'),
    (10012, 456, 1, 28, '2022-02-01', 22162.5, null);
```

SELECT Statements

```
-- Statement 1

SELECT *
FROM models

WHERE "modelName" = 'Prius'

-- Statement 2

SELECT *
FROM "salesContracts"

WHERE "signedDate" = '2022-02-01';

-- Statement 3

SELECT timestamp
FROM "productionLogs"

WHERE "automobileID" = 458 and status = 'vehicle delivered to dealer';

-- Statement 4

SELECT *
FROM automobiles

WHERE "stickerPrice" <= 40000;
```