DROP TABLE "riders";
-- Remove riders table

ALTER TABLE "visits" RENAME TO "swipes";
-- Add "ttpe" column to "swipes" table (intentional typo)

ALTER TABLE "swipes" ADD COLUMN "ttpe" TEXT;
-- Fix typo using RENAME COLUMN

ALTER TABLE "swipes" RENAME COLUMN "ttpe" TO "type";
-- Create three tables without specified type affinities

-- Riders
CREATE TABLE "riders"
(
  "id",
  "name"
);

-- Stations
CREATE TABLE "stations"
(
  "id",
  "name",
  "line"
);

-- Visits
CREATE TABLE "visits"
(
  "rider_id",
  "station_id"
);
-- Add type affinities
-- Riders have a name
CREATE TABLE "riders" (  
    "id" INTEGER,  
    "name" TEXT  
);  

-- Stations have a name and a line
CREATE TABLE "stations" (  
    "id" INTEGER,  
    "name" TEXT,  
    "line" TEXT  
);  

-- Riders visit stations
CREATE TABLE "visits" (  
    "rider_id" INTEGER,  
    "station_id" INTEGER  
);
-- Add primary and foreign key table constraints

-- Riders have a name
CREATE TABLE "riders" (
    "id" INTEGER,
    "name" TEXT,
    PRIMARY KEY("id")
);

-- Stations have a name and a line
CREATE TABLE "stations" (
    "id" INTEGER,
    "name" TEXT,
    "line" TEXT,
    PRIMARY KEY("id")
);

-- Riders visit stations
CREATE TABLE "visits" (
    "rider_id" INTEGER,
    "station_id" INTEGER,
    FOREIGN KEY("rider_id") REFERENCES "riders"("id"),
    FOREIGN KEY("station_id") REFERENCES "stations"("id")
);
-- Add primary and foreign key table constraints

-- Riders have a name
CREATE TABLE "riders" (
  "id" INTEGER,
  "name" TEXT,
  PRIMARY KEY("id")
);

-- Stations have a name and a line
CREATE TABLE "stations" (
  "id" INTEGER,
  "name" TEXT NOT NULL UNIQUE,
  "line" TEXT NOT NULL,
  PRIMARY KEY("id")
);

-- Riders visit stations
CREATE TABLE "visits" (
  "rider_id" INTEGER,
  "station_id" INTEGER,
  FOREIGN KEY("rider_id") REFERENCES "riders"("id"),
  FOREIGN KEY("station_id") REFERENCES "stations"("id")
);
-- Add cards and swipes, remove riders, to represent CharlieCard usage

-- Riders are represented by cards
CREATE TABLE "cards" (  
"id" INTEGER,  
PRIMARY KEY("id")
);

-- Stations have a name and a line
CREATE TABLE "stations" (  
"id" INTEGER,  
"name" TEXT NOT NULL UNIQUE,  
"line" TEXT NOT NULL,  
PRIMARY KEY("id")
);

-- Cards can swipe at a station, in order to enter, exit, or deposit funds
CREATE TABLE "swipes" (  
"id" INTEGER,  
"card_id" INTEGER,  
"station_id" INTEGER,  
"type" TEXT,  
"datetime" NUMERIC,  
"amount" NUMERIC,  
PRIMARY KEY("id"),  
FOREIGN KEY("station_id") REFERENCES "stations"("id"),  
FOREIGN KEY("card_id") REFERENCES "cards"("id")
);
-- Add NOT NULL column constraint to indicate required/optional fields

-- Riders are represented by cards
CREATE TABLE "cards" (  
   "id" INTEGER,  
   PRIMARY KEY("id")  
) ;

-- Stations have a name and a line
CREATE TABLE "stations" (  
   "id" INTEGER,  
   "name" TEXT NOT NULL UNIQUE,  
   "line" TEXT NOT NULL,  
   PRIMARY KEY("id")  
) ;

-- Cards can swipe at a station, in order to enter, exit, or deposit funds
CREATE TABLE "swipes" (  
   "id" INTEGER,  
   "card_id" INTEGER,  
   "station_id" INTEGER,  
   "type" TEXT NOT NULL,  
   "datetime" NUMERIC NOT NULL,  
   "amount" NUMERIC NOT NULL,  
   PRIMARY KEY("id"),  
   FOREIGN KEY("station_id") REFERENCES "stations"("id"),  
   FOREIGN KEY("card_id") REFERENCES "cards"("id")  
) ;
-- Add DEFAULT column "constraint" to datetime

-- Riders are represented by cards
CREATE TABLE "cards" (  
  "id" INTEGER,
  PRIMARY KEY("id")
);

-- Stations have a name and a line
CREATE TABLE "stations" (  
  "id" INTEGER,
  "name" TEXT NOT NULL UNIQUE,
  "line" TEXT NOT NULL,
  PRIMARY KEY("id")
);

-- Cards can swipe at a station, in order to enter, exit, or deposit funds
CREATE TABLE "swipes" (  
  "id" INTEGER,
  "card_id" INTEGER,
  "station_id" INTEGER,
  "type" TEXT NOT NULL,
  "datetime" NUMERIC NOT NULL DEFAULT CURRENT_TIMESTAMP,
  "amount" NUMERIC NOT NULL,
  PRIMARY KEY("id"),
  FOREIGN KEY("station_id") REFERENCES "stations"("id"),
  FOREIGN KEY("card_id") REFERENCES "cards"("id")
);
-- Add CHECK column constraint to validate types of swipes and transactions, ensure non-zero transaction amounts

-- Riders are represented by cards
CREATE TABLE "cards" (
  "id" INTEGER,
  PRIMARY KEY("id")
);

-- Stations have a name and a line
CREATE TABLE "stations" (
  "id" INTEGER,
  "name" TEXT NOT NULL UNIQUE,
  "line" TEXT NOT NULL,
  PRIMARY KEY("id")
);

-- Cards can swipe at a station, in order to enter, exit, or deposit funds
CREATE TABLE "swipes" (
  "id" INTEGER,
  "card_id" INTEGER,
  "station_id" INTEGER,
  "type" TEXT NOT NULL CHECK("type" IN ('enter', 'exit', 'deposit')),
  "datetime" NUMERIC NOT NULL DEFAULT CURRENT_TIMESTAMP,
  "amount" NUMERIC NOT NULL CHECK("amount" != 0),
  PRIMARY KEY("id"),
  FOREIGN KEY("station_id") REFERENCES "stations"("id"),
  FOREIGN KEY("card_id") REFERENCES "cards"("id")
);