
```
1 -- Demonstrates removing a table
2 -- Uses mbta.db
3
4 -- Removes riders table
5 DROP TABLE "riders";
```

```
1 -- Demonstrates renaming a table
2 -- Uses mbta.db
3
4 -- Renames "vists" table to "swipes"
5 ALTER TABLE "visits" RENAME TO "swipes";
```

```
1  -- Demonstrates adding a column to a table
2  -- Uses mbta.db
3
4  -- Adds "tpe" column to "swipes" table (intentional typo)
5  ALTER TABLE "swipes" ADD COLUMN "tpe" TEXT;
```

```
1  -- Demonstrates renaming a column
2  -- Uses mbta.db
3
4  -- Fixes typo using RENAME COLUMN
5  ALTER TABLE "swipes" RENAME COLUMN "tpe" TO "type";
```

```
1 -- Demonstrates creating a table schema
2 -- Creates mbta.db
3
4 -- Deletes prior tables if they exist
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates three tables without specified type affinities
12 CREATE TABLE "riders" (
13     "id",
14     "name"
15 );
16
17 CREATE TABLE "stations" (
18     "id",
19     "name",
20     "line"
21 );
22
23 CREATE TABLE "visits" (
24     "rider_id",
25     "station_id"
26 );
```

```
1 -- Adds type affinities
2 -- Creates mbta.db
3
4 -- Deletes prior tables if they exist
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "riders" (
13     "id" INTEGER,
14     "name" TEXT
15 );
16
17 CREATE TABLE "stations" (
18     "id" INTEGER,
19     "name" TEXT,
20     "line" TEXT
21 );
22
23 CREATE TABLE "visits" (
24     "rider_id" INTEGER,
25     "station_id" INTEGER
26 );
```

```
1  -- Adds primary and foreign key table constraints
2  -- Creates mbta.db
3
4  -- Deletes prior tables if they exist
5  DROP TABLE IF EXISTS "riders";
6  DROP TABLE IF EXISTS "stations";
7  DROP TABLE IF EXISTS "visits";
8  DROP TABLE IF EXISTS "swipes";
9  DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "riders" (
13     "id" INTEGER,
14     "name" TEXT,
15     PRIMARY KEY("id")
16 );
17
18 CREATE TABLE "stations" (
19     "id" INTEGER,
20     "name" TEXT,
21     "line" TEXT,
22     PRIMARY KEY("id")
23 );
24
25 CREATE TABLE "visits" (
26     "rider_id" INTEGER,
27     "station_id" INTEGER,
28     FOREIGN KEY("rider_id") REFERENCES "riders"("id"),
29     FOREIGN KEY("station_id") REFERENCES "stations"("id")
30 );
```

```
1  -- Adds UNIQUE, NOT NULL as column constraints
2  -- Creates mbta.db
3
4  -- Deletes prior tables if they exist
5  DROP TABLE IF EXISTS "riders";
6  DROP TABLE IF EXISTS "stations";
7  DROP TABLE IF EXISTS "visits";
8  DROP TABLE IF EXISTS "swipes";
9  DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "riders" (
13     "id" INTEGER,
14     "name" TEXT,
15     PRIMARY KEY("id")
16 );
17
18 CREATE TABLE "stations" (
19     "id" INTEGER,
20     "name" TEXT NOT NULL UNIQUE,
21     "line" TEXT NOT NULL,
22     PRIMARY KEY("id")
23 );
24
25 CREATE TABLE "visits" (
26     "rider_id" INTEGER,
27     "station_id" INTEGER,
28     FOREIGN KEY("rider_id") REFERENCES "riders"("id"),
29     FOREIGN KEY("station_id") REFERENCES "stations"("id")
30 );
```



```
1 -- Updates schema to represent CharlieCard usage
2 -- Creates mbta.db
3
4 -- Delete sprior tables if they exist
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "cards" (
13     "id" INTEGER,
14     PRIMARY KEY("id")
15 );
16
17 CREATE TABLE "stations" (
18     "id" INTEGER,
19     "name" TEXT NOT NULL UNIQUE,
20     "line" TEXT NOT NULL,
21     PRIMARY KEY("id")
22 );
23
24 CREATE TABLE "swipes" (
25     "id" INTEGER,
26     "card_id" INTEGER,
27     "station_id" INTEGER,
28     "type" TEXT,
29     "datetime" NUMERIC,
30     "amount" NUMERIC,
31     PRIMARY KEY("id"),
32     FOREIGN KEY("station_id") REFERENCES "stations"("id"),
33     FOREIGN KEY("card_id") REFERENCES "cards"("id")
34 );
```

```
1 -- Adds NOT NULL column constraints
2 -- Creates mbta.db
3
4 -- Deletes prior version of tables
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "cards" (
13     "id" INTEGER,
14     PRIMARY KEY("id")
15 );
16
17 CREATE TABLE "stations" (
18     "id" INTEGER,
19     "name" TEXT NOT NULL UNIQUE,
20     "line" TEXT NOT NULL,
21     PRIMARY KEY("id")
22 );
23
24 CREATE TABLE "swipes" (
25     "id" INTEGER,
26     "card_id" INTEGER,
27     "station_id" INTEGER,
28     "type" TEXT NOT NULL,
29     "datetime" NUMERIC NOT NULL,
30     "amount" NUMERIC NOT NULL,
31     PRIMARY KEY("id"),
32     FOREIGN KEY("station_id") REFERENCES "stations"("id"),
33     FOREIGN KEY("card_id") REFERENCES "cards"("id")
34 );
```

```
1 -- Adds DEFAULT column constraint
2 -- Creates mbta.db
3
4 -- Deletes prior tables if they exist
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "cards" (
13     "id" INTEGER,
14     PRIMARY KEY("id")
15 );
16
17 CREATE TABLE "stations" (
18     "id" INTEGER,
19     "name" TEXT NOT NULL UNIQUE,
20     "line" TEXT NOT NULL,
21     PRIMARY KEY("id")
22 );
23
24 CREATE TABLE "swipes" (
25     "id" INTEGER,
26     "card_id" INTEGER,
27     "station_id" INTEGER,
28     "type" TEXT NOT NULL,
29     "datetime" NUMERIC NOT NULL DEFAULT CURRENT_TIMESTAMP,
30     "amount" NUMERIC NOT NULL,
31     PRIMARY KEY("id"),
32     FOREIGN KEY("station_id") REFERENCES "stations"("id"),
33     FOREIGN KEY("card_id") REFERENCES "cards"("id")
34 );
```

```
1 -- Adds CHECK column constraint to validate swipes
2 -- Creates mbta.db
3
4 -- Deletes prior tables if they exist
5 DROP TABLE IF EXISTS "riders";
6 DROP TABLE IF EXISTS "stations";
7 DROP TABLE IF EXISTS "visits";
8 DROP TABLE IF EXISTS "swipes";
9 DROP TABLE IF EXISTS "cards";
10
11 -- Creates tables with updated schema
12 CREATE TABLE "cards" (
13     "id" INTEGER,
14     PRIMARY KEY("id")
15 );
16
17 CREATE TABLE "stations" (
18     "id" INTEGER,
19     "name" TEXT NOT NULL UNIQUE,
20     "line" TEXT NOT NULL,
21     PRIMARY KEY("id")
22 );
23
24 CREATE TABLE "swipes" (
25     "id" INTEGER,
26     "card_id" INTEGER,
27     "station_id" INTEGER,
28     "type" TEXT NOT NULL CHECK("type" IN ('enter', 'exit', 'deposit')),
29     "datetime" NUMERIC NOT NULL DEFAULT CURRENT_TIMESTAMP,
30     "amount" NUMERIC NOT NULL CHECK("amount" != 0),
31     PRIMARY KEY("id"),
32     FOREIGN KEY("station_id") REFERENCES "stations"("id"),
33     FOREIGN KEY("card_id") REFERENCES "cards"("id")
34 );
```