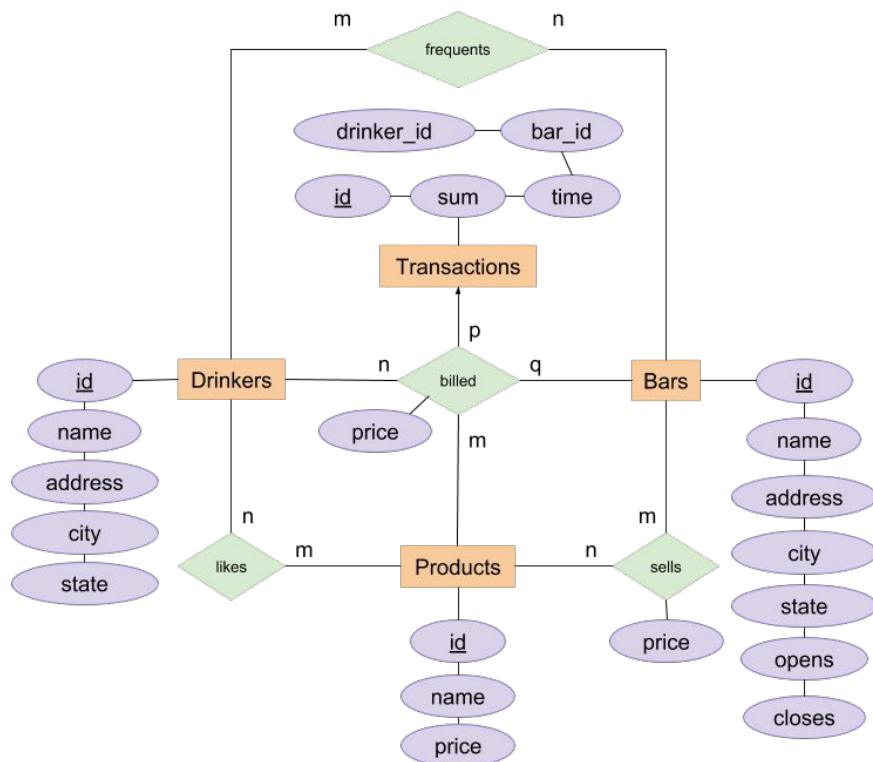


BBD

Rafal Stapinski

Schema



Pricing included in three spots:

On Product to keep “distributor” pricing and easily create new sells

On Sells to keep track when creating new bills

On billed in case price ever changes in Sells

Transactions keep track of total transactions, while Billed keeps track of individually billed products

```
Drinker[id, name, address, city, state]
Product[id, name, price]
Bar[id, name, address, city, state, opens, closes]
Transaction[id, sum, time, Bar.id, Drinker.id]
Frequents[Drinker.id, Bar.id]
Sells[Bar.id, Product.id, price]
Billed[Transaction.id, Product.id, price]
Likes[Drinker.id, Bar.id]
```

Data Generation

Generate Bars/Restaurants with Foursquare API

Get restaurants and their relative pricing index, used when adjusting distributor price in Sells (base price + realistic relative markup)

Get their lat/long location with OpenStreetMaps Nominatim (to generate nearby drinkers)

Generate Products

A short list of products expected to be sold at bars/restaurants with realistic base prices

Sells are created by choosing random amount of products and adding markup based on Foursquare price rating

Data Generation (cont)

Generate Drinkers with Names library in Python

Generate nearby real addresses with Nominatim and OpenAddr public data

Add frequents based on state/ distance to create realistic habits as well as frequenting bars that sell at least one likes

Generate transactions

Generate long list of billables by mixing products from sells, adding together with tax and random tip, and storing at random time within past few months during open hours

Back End - Rest

Uses web.py library in Python

Several layers

Model: Models intersection of database schema and front end requirements for easy type checking within Python

Resource: Inherits connection to DB, and interacts, returning Model/updating DB

Route: Interfaces the Resource based on HTTP verb (POST, GET, PUT, DELETE)

Front end - react

Uses my react boilerplate

React for displaying/rendering elements and controlling page state

Express for server-side rendering/connecting to REST

Apollo/graphQL for easier data retrieval

Typescript for type consistency and general housekeeping

App structure

Each page (Drinkers, Bars, Products) displays all objects in that relation

Navigating to one, brings details on the specific object as well as:

Where and by who was each transaction made by that person/bar

Each can lead to detailed view of that transaction

Also display bar graphs of most popular respective relations (sells, likes, frequents) which links to respective other object

Interface page

Shows verification statuses/functions which are used to display the integrity of the patterns across database

Has inputs/outputs for POST/PUT/DELETE actions on database

Example pages

Randy Fox at Chickie's & Pete's at 2018-10-16 19:42:00 for \$54.41

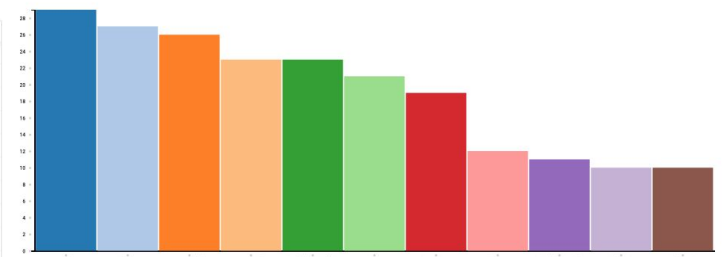
- Coors Light \$2.5
- Budweiser \$3.5
- Angry Orchards \$4.5
- Dos Equis \$3.5
- Dos Equis \$3.5
- Miller Lite \$2.5
- Rodenbach Grand Cru \$6.5
- Rodenbach Grand Cru \$6.5
- Rodenbach Grand Cru \$6.5
- Tyskie \$5.5

Tip: \$6.26

ID	Name	Address	City	State
67	Randy Fox	68 Siegtown Road	Middle Township	New Jersey
68	Cynthia Johnson	98 Hampton Court	Mount Laurel Township	New Jersey
69	Bernadine Chavez	1197 Karin Street	Vineland	New Jersey
70	Jesse Sides	92 Montclair Avenue	Nutley	New Jersey
71	Joan Richards	127 Berkeley Avenue	Newark	New Jersey
72	Victoria Imes	50 Madison Avenue	Egg Harbor Township	New Jersey
73	John Fujiwara	227 Tennessee Trail	Pemberton Township	New Jersey
74	Gertrude Alexander	11 Washington Street	Tenafly	New Jersey
75	Robert Hill	104 Chesterfield Road	Chesterfield Township	New Jersey
76	Linda Lindsey	345 Franklin Turnpike	Ramsey	New Jersey
77	Ana Bay	54 Canterbury Court	Teaneck Township	New Jersey
78	Agnes Dalton	1681 Hubbard Lane	Vineland	New Jersey
79	Tim Hickman	611 Tilden Avenue	Teaneck Township	New Jersey
80	Tricia Shuman	6 Boothby Drive	Mount Laurel Township	New Jersey
81	Annette Rosado	77 Honeyflower Drive	Bordentown Township	New Jersey
82	Sergio Huffman	68 Dinallo Street	South Hackensack	New Jersey
83	Darlene Limoli	23 Albert Street	North Arlington	New Jersey
84	Kathleen Diaz	132 Spruce Avenue	Bellmawr	New Jersey
85	Corinne Terry	301 Larch Road	Mount Laurel Township	New Jersey
86	Patricia Slayton	614 Johnson Road	Gloucester Township	New Jersey

ID	Total	Timestamp	Bar
11	72.89	2018-01-29 11:31:00	Chickie's & Pete's
12	55.91	2018-10-17 15:25:00	Chickie's & Pete's
13	54.41	2018-10-16 19:42:00	Chickie's & Pete's
14	63.22	2018-09-24 23:19:00	Chickie's & Pete's
15	15.02	2018-10-21 15:50:00	Chickie's & Pete's
16	37.28	2018-02-22 00:03:00	Chickie's & Pete's
17	75.74	2018-03-04 14:05:00	Chickie's & Pete's
18	17.19	2018-08-15 12:38:00	Chickie's & Pete's
19	21.83	2018-04-12 23:26:00	Chickie's & Pete's
20	63.99	2018-04-17 20:28:00	Chickie's & Pete's
21	41.78	2018-08-20 17:41:00	Chickie's & Pete's
22	5.4	2018-07-24 14:33:00	Chickie's & Pete's
23	49.23	2018-09-18 22:00:00	Chickie's & Pete's
24	49.66	2018-06-27 17:20:00	Chickie's & Pete's
25	67.68	2018-03-18 14:41:00	Chickie's & Pete's
26	46.29	2018-07-19 22:16:00	Chickie's & Pete's
27	33.71	2018-07-17 20:50:00	Chickie's & Pete's
28	14.4	2018-06-07 00:41:00	Chickie's & Pete's
29	65.16	2018-07-12 14:03:00	Chickie's & Pete's
30	18.83	2018-07-07 20:57:00	Spigola Ristorante

Top products



Top bars

