

# US Food Prices

Kerr Salabao and Tiger Ruan

### Introduction:

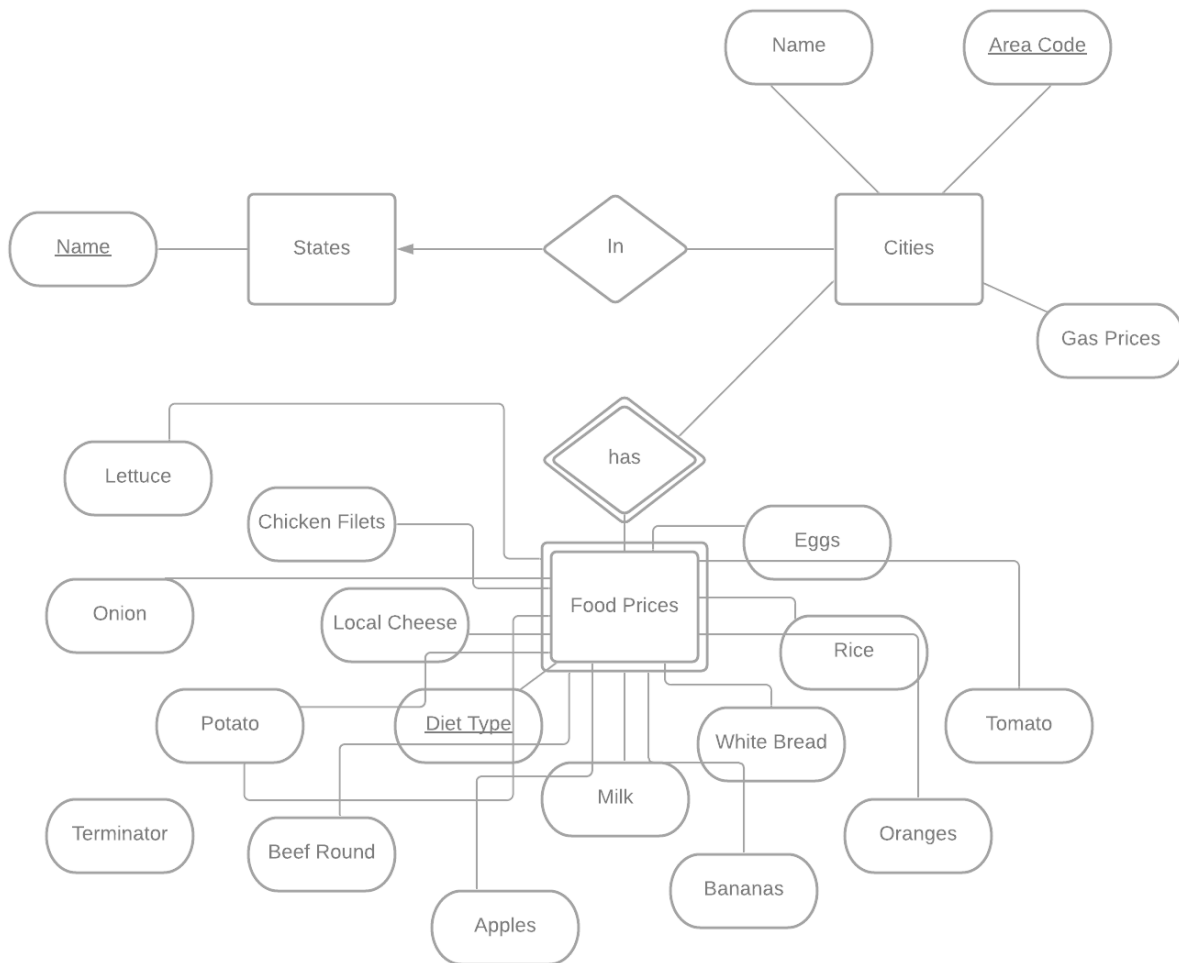
Our mini-world scenario is the price of food in cities of the United States. We used the Numbeo API to grab the attributes we are using for our database, targeting the most common foods available such as bread loaves, eggs, milk, and more.

### Requirements Analysis:

The data is from Numbeo. We will be using food prices, gas prices, cities, states, for now. If we need to augment the table, we can look for another data source and combine them. Operations on our data include searching and sorting.

### Conceptual Design:

Here is an ER Diagram with constraints using Lucid  
(Outdated diagram)



A good part of our design is its extendability. If we wish for more cost of living metrics, we can grab data from any exterior source and append it to the Cities Entity. We may also create more entities for categorization under food prices, if needed/discovered to be better later.

**Report 2 Update:**

Here is our new ER diagram focused on solely food prices.

(We need help on our new ER diagram, this looks even worse?)

Logical Design:

*Food Type(Food\_name,item\_id)*

*Milk(average price, City\_Name)*

*White Bread(average price, City\_Name)*

*Rice(average price, City\_Name)*

*Eggs(average price, City\_Name)*

*Local Cheese(average price, City\_Name)*

*Chicken Fillet(average price, City\_Name)*

*Beef Round(average price, City\_Name)*

*Apples(average price, City\_Name)*

*Banana(average price, City\_Name)*

*Oranges(average price, City\_Name)*

*Tomato(average price, City\_Name)*

*Potato(average price, City\_Name)*

*Onion(average price, City\_Name)*

*Lettuce(average price, City\_Name)*

## Extra code:

We also used a python program to pull the data using the Numbeo api. We plan to extend the code and use the data we received here to generate an SQL file similar to cruise.sql. In other words we will create a loop that will go through the data we pulled to create SQL insert statements. The code we have finished so far does the first part, which is data gathering. We will finish the second part later.

```
import requests
import json

##Get all the names of all cities and place it into an array##
cities_url="https://www.numbeo.com/api/cities?api_key=s3lxzv9hgsytve"
cities_response = requests.get(cities_url)

cities_data = cities_response.text
cities_parsed = json.loads(cities_data)

cities = cities_parsed["cities"]
city_list = []
country_and_city = ["city", "country"]

for x in range(len(cities)):
    city_list.append({key:cities[x][key] for key in country_and_city})

food_and_city = []

##This is to get each city food prices
for x in city_list:
    if x["country"] == "United States":
        url = "https://www.numbeo.com/api/city_prices?api_key=s3lxzv9hgsytve&query=" +
x["city"] + "," + x["country"]
        response = requests.get(url)

        data = response.text
        parsed = json.loads(data)
        print(json.dumps(parsed, indent =4))

        if "prices" in parsed:
            items = parsed["prices"]
            food_prices = []
            current_city = x["city"]
            attribute_subset = [ "average_price", "item_name"]

            for i in range(len(items)):
                if (("Restaurant" in items[i]["item_name"]) or ("Market" in
items[i]["item_name"])) and ("average_price" in items[i]):
                    food_prices.append({key:items[i][key] for key in
```

```
attribute_subset}))
```

```
cityPrice = [food_prices, current_city]  
food_and_city.append(cityPrice)  
print(food_and_city[0])
```