## PLAN OF ACTION

* Download the data
* Choose what area to study (**customers**)
* Go through and study the data
* Clean data! (more than likely using Power BI and use Power Query to transform)
  + Account for null and error values in all tables, especially find and replace
  + Remove unnecessary columns
    - Users: gender (unusable in my mind, not important to the analysis anyway), username, password, email
    - Orders: currency
    - Restaurants: Link, cost, address, menu
* After cleaning the data
  + Do you need/should you join any tables
    - If I’m going to be studying consumer behavior, I’ll obviously want *users* as my primary study
    - Other useful tables/columns
      * Orders: order\_date, (PK) user\_id, (SK) r\_id
        + Primarily for the sake of seeing repeat orders and the like loyalty
      * Restaurant: (SK) id (is r\_id elsewhere), city, rating, cuisine, name
        + Again, add info to the above. See which cities have the most restaurants to users, where the most traffic goes, and the most popular cuisines
    - Would be good to join *users* to *orders* and *orders* to *restaurant*
      * User to orders is going to be a one to many (users to orders)  
        orders to restaurants will be many to one (orders to restaurants)
  + Customer segments available
    - Gender – unusable, fully jumbled up
    - Age
    - Marital status
    - Occupation
    - Income level
    - Education level
    - Family size
    - All
  + Customer habits to explore
    - Days of week with the most orders (per rest, city, and customer segment)
    - Repeat orders at the same restaurants
    - Family size vs order day of week
    - Income level vs time of month
* What am I going to study?
  + What questions would I have as a business owner looking to learn about their customers?
    - Which days of the week do we get the most orders?
    - What days of the week do we get the most profit?
    - What is the employment status of our most frequent customers?
    - What is the marital status of our top 10%, 20% customers?
    - Are there any times of year where the customer’s order more than others? Quarterly? Monthly?
    - Are customers more inclined to order from higher-rated restaurants?
    - How many customers are repeat customers? (more than once, and more than 2x)
    - Average order volume per day/week/month per restaurant with
      * NOT *Too Few Ratings*
      * HAS lic no (license number)
  + What is my goal for the project?
    - I want to figure out what kinds of promotions we can offer different customer segments
    - Hypotheses
      * People tend to order most often Thursday – Sunday, primarily Friday and Saturday and creating a weekend-based advertisement campaign could increase overall sales.
      * Larger families order out less due to cost, so providing discounts for large orders could increase the probability of larger orders if it saves them some more money.
      * When a loyalty plan or properly planned promotional campaigns (such as holiday-based discounts) are provided, customer loyalty and spending tend to increase.
* How will I achieve this goal?
  + I am leaning towards Power BI however I am not sure yet, could change to Tableau at a later date.
* How will I present this goal?
  + I’ll be presenting multiple dashboards with basic graphs such as bar/stacked bar, maps, KPI cards, tables, scatterplots, line graphs, and text. These will create a cohesive story about the data.
  + I will also be attaching a report of my findings in a PDF format.

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