Journal Entry 2.7

1. Consider your favorite website/application (you can also take CareerFoundry). Think about the various data that your favorite website/application collects. Write down how analyzing the collected data could help the website/application.

   Analyzing this collected data helps website developers learn what features of their website users use the most or least and the overall behavior of their users. With this information they can help improve user experience and increase their engagement.

2. Read the Django official documentation on QuerySet API. Note down the different ways in which you can evaluate a QuerySet.
   - Iteration
   - Indexing
   - Slicing
   - Counting
   - Existence Checks
   - Aggregation

3. In the Exercise, you converted your QuerySet to DataFrame. Now do some research on the advantages and disadvantages of QuerySet and DataFrame, and explain the ways in which DataFrame is better for data processing.

   QuerySet is a collection of data from a database, it is built up as a list of objects. It makes it easy to get the data you need by allowing you to filter and order the data at an early stage. Since it is designed for working with data stored in a relational database it is best used for handling large data sets. Some disadvantages of QuerySet are that is can only be used with relational databases. It is also a built in structure in Django so it will not be suitable for use in another type of application.

   DataFrame is a data structure that is used with many different data sources. It has many capabilities for data manipulation, cleaning, and transformation which make it great to use for complex data processing.
   Some disadvantages of DataFrame is that it is memory intensive which can lead to performance issues when working with large datasets. It is slower when working with relational databases. Also, it is more difficult to use with complex queries.
   DataFrame is more flexible, has more power, and better performance for data processing tasks. It is great to use on a wider range of data sources and can better handle complex data manipulation requirements.

Task 2.7

Search:

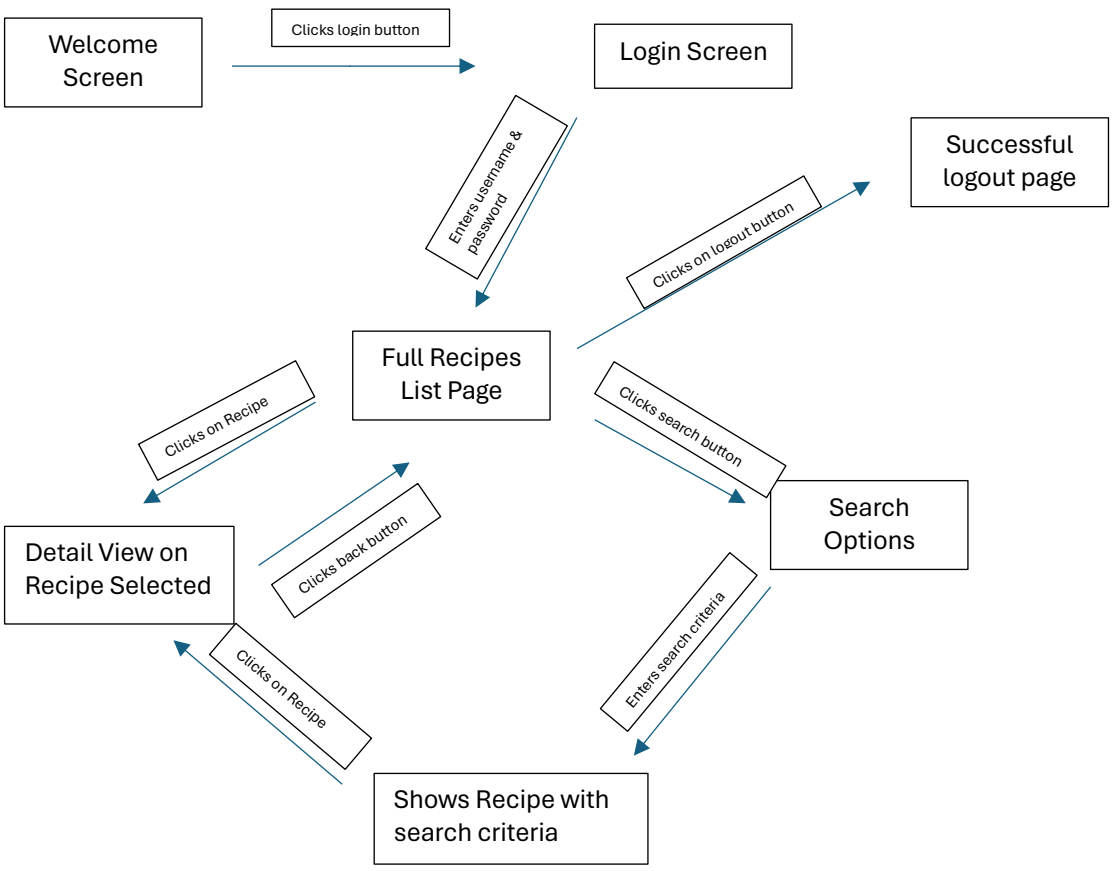
- By name

- By ingredient
- Difficulty

Data Analysis

- X-axis: name
- Y-axis: cooking time

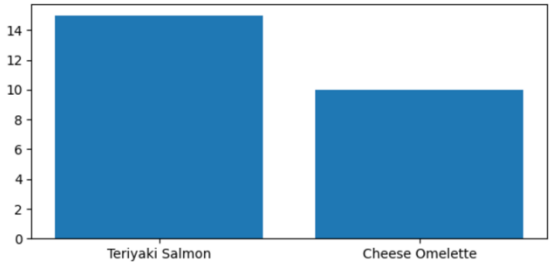
Execution Flow



Search for Recipe Records

Recipe diff: Intermediate Chart type: Bar chart search

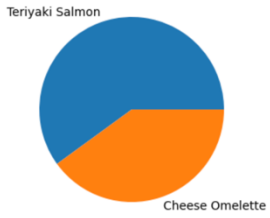
	id	name	cooking_time	ingredients	pic
0	2	Teriyaki Salmon	15.0	Teriyaki, Salmon	recipes/TeriyakiSalmon.jpeg
1	3	Cheese Omelette	10.0	Eggs, Salt, Cheese	recipes/CheeseOmelette.jpeg



Search for Recipe Records

Recipe diff: Intermediate Chart type: Pie chart search

	id	name	cooking_time	ingredients	pic
0	2	Teriyaki Salmon	15.0	Teriyaki, Salmon	recipes/TeriyakiSalmon.jpeg
1	3	Cheese Omelette	10.0	Eggs, Salt, Cheese	recipes/CheeseOmelette.jpeg



Search for Recipe Records

Recipe diff: Intermediate Chart type: Line chart search

	id	name	cooking_time	ingredients	pic
0	2	Teriyaki Salmon	15.0	Teriyaki, Salmon	recipes/TeriyakiSalmon.jpeg
1	3	Cheese Omelette	10.0	Eggs, Salt, Cheese	recipes/CheeseOmelette.jpeg