## **Numpy and Pandas Questions**

For the questions below, create your own arrays with the different numpy array creation functions.

- 1. Create a null vector of size 10
- 2. Create a null vector of size 10 but the fifth value which is 1
- 3. Create a 3x3 matrix with values ranging from 0 to 8
- 4. Create a 3x3x3 array with random values
- 5. Multiply a 5x3 matrix by a 3x2 matrix (real matrix product)
- 6. Create a 5x5 matrix with row values ranging from 0 to 4
- 7. Subtract the mean of each row of a matrix
- 8. How to get the diagonal of a dot product?
- 9. How to find the most frequent value in an array?
- 10. Create a random vector of size 10 and sort it

## **Pandas**

Download the csv file from the <u>location</u> and write code do to the following questions.

Import the Dataset (Hint: It's a tsv file)

- 1. Assign it to a variable called chipo.
- 2. See the first 10 entries
- 3. What is the number of observations in the dataset?
- 4. What is the number of columns in the dataset?
- 5. Print the name of all the columns.
- 6. How is the dataset indexed?
- 7. Which was the most-ordered item?
- 8. For the most-ordered item, how many items were ordered?
- 9. What was the most ordered item in the choice\_description column?
- 10. How many items were orderd in total?
- 11. Turn the item price into a float
- 12. Check the item price type
- 13. How much was the revenue for the period in the dataset?
- 14. How many different items are sold?
- 15. How many orders were made in the period?
- 16. What is the average amount per order?