# quantiumtak2

March 12, 2025

[1]:
```
import pandas as pd
import numpy as np
```

[13]:
```
file_path = "C:\\Users\\Praveen\\OneDrive\\Documents\\Quantium\\QVI_data.csv"
dataset = pd.read_csv(file_path)
```

[9]:
```
dataset.head()
```

[9]:

| | DATE | STORE_NBR | LYLTY_CARD_NBR | TXN_ID | PROD_NBR | PROD_NAME | PROD_QTY | TOT_SALES |
|---|---|---|---|---|---|---|---|---|
| 0 | 43390 | 1 | 1000 | 1 | 5 | Natural Chip Compny SeaSalt175g | 2 | 6.0 |
| 1 | 43599 | 1 | 1307 | 348 | 66 | CCs Nacho Cheese 175g | 3 | 6.3 |
| 2 | 43605 | 1 | 1343 | 383 | 61 | Smiths Crinkle Cut Chips Chicken 170g | 2 | 2.9 |
| 3 | 43329 | 2 | 2373 | 974 | 69 | Smiths Chip Thinly S/Cream&Onion 175g | 5 | 15.0 |
| 4 | 43330 | 2 | 2426 | 1038 | 108 | Kettle Tortilla ChpsHny&Jlpno Chili 150g | 3 | 13.8 |

[14]:
```
#Total Sales
total_sales = sum(dataset['TOT_SALES'])
print(total_sales)
```

```
1933115.0
```

[15]:
```
#Total number of cutomeres
dataset.describe()
```

[15]:

| | LYLTY_CARD_NBR | STORE_NBR | TXN_ID | PROD_NBR |
|---|---|---|---|---|
| count | 2.648340e+05 | 264834.000000 | 2.648340e+05 | 264834.000000 |
| mean | 1.355488e+05 | 135.079423 | 1.351576e+05 | 56.583554 |
| std | 8.057990e+04 | 76.784063 | 7.813292e+04 | 32.826444 |
| min | 1.000000e+03 | 1.000000 | 1.000000e+00 | 1.000000 |
| 25% | 7.002100e+04 | 70.000000 | 6.760050e+04 | 28.000000 |
| 50% | 1.303570e+05 | 130.000000 | 1.351365e+05 | 56.000000 |

```
75%       2.030940e+05     203.000000  2.026998e+05      85.000000
max       2.373711e+06     272.000000  2.415841e+06     114.000000

            PROD_QTY      TOT_SALES      PACK_SIZE
count  264834.000000  264834.000000  264834.000000
mean        1.905813       7.299346     182.425512
std         0.343436       2.527241      64.325148
min         1.000000       1.500000      70.000000
25%         2.000000       5.400000     150.000000
50%         2.000000       7.400000     170.000000
75%         2.000000       9.200000     175.000000
max         5.000000      29.500000     380.000000
```

[18]:
```
total_customer = 241584
```

[20]:
```
#Average number of transactions per customer
dataset.shape
```

[20]:
```
(264834, 12)
```

[21]:
```
total_customer = 241584
transactions = 264834
avg_transaction = total_customer/transactions
print(avg_transaction)
```

```
0.9122091574344684
```