Hello, welcome to another lesson on python and the data science libraries (Numpy, Pandas and Matplotlib). This is another dummy dataset that i worked on as i learned and grow on this career path. I want you to connect deeply with these dataset and feel encouraged about what you're doing. We all do it a little poorly until we get better. That's why i share my journey and my growth process.

So, Let's get started !!!

The first step is to import numpy and pandas libraries and load in the dataset. I also read the first 10 lines of the imported data as well as the last 10 using the .head() and .tail() functions respectively. This is for me to have an idea of wha my Dataset looks like.

```
In [1]: import numpy as np
import pandas as pd
filez = pd.read_excel("Excursion Portfolio.xls")
filez.head(10)
```

Out[1]:

Unname	Unnamed: 7	Unnamed: 6	Unnamed: 5	Unnamed: 4	Unnamed: 3	Unnamed: 2	Unnamed: 1	Unnamed: 0	
N	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0
N	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1
N	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	2
N	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	3
T-sł	Amount Paid	Status	Name	S/N	NaN	NaN	NaN	NaN	4
Ту	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	5
Lo Slee	12000	Member	Victor T. Na'Allah	1	NaN	NaN	NaN	NaN	6
Lo Slee	12000	Member	Olajide Mattew	2	NaN	NaN	NaN	NaN	7
Lo Slee	12000	Member	Abel Modu Timothy	3	NaN	NaN	NaN	NaN	8
Lo Slee	12000	Member	Egwim Jones Udojuaku	4	NaN	NaN	NaN	NaN	9

In [2]:	file	z.tail(10)							
Out[2]:		Unnamed: 0	Unnamed:	Unnamed:	Unnamed:	Unnamed:	Unnamed:	Unnamed:	Unnamed:	Unnar
		<u> </u>	· · · · · · · · · · · · · · · · · · ·		<u>ა</u>	4	5	6		
	48	NaN	NaN	NaN	NaN	43	Shekinah Ajibola	Member	12000	l Sl
	49	NaN	NaN	NaN	NaN	44	Adanu David	Member	9000	
	50	NaN	NaN	NaN	NaN	45	Oche Muscle	Member	9500	
	51	NaN	NaN	NaN	NaN	46	Ocheje Jeremiah	Member	12000	S Sl
	52	NaN	NaN	NaN	NaN	47	Oguntowo Basit Ifedolapo	Member	12000	
	53	NaN	NaN	NaN	NaN	48	Simeon Iganga	Member	12000	
	54	NaN	NaN	NaN	NaN	49	Caleb Onuoja Aaron	Ex-Exco	8000	
	55	NaN	NaN	NaN	NaN	TOTAL	NaN	NaN	537500	
	56	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
	57	NaN	NaN	NaN	NaN	Total Members Registered	NaN	NaN	49	

I also checked other properties of the dataset which includes its shape size dimension and the data types respectively

```
In [3]: filez.shape
Out[3]: (58, 11)
In [4]: filez.size
Out[4]: 638
In [5]: filez.ndim
Out[5]: 2
```

```
In [6]: filez.dtypes
Out[6]: Unnamed: 0
                        float64
                        float64
        Unnamed: 1
                        float64
        Unnamed: 2
        Unnamed: 3
                        float64
        Unnamed: 4
                         object
        Unnamed: 5
                         object
        Unnamed: 6
                         object
                         object
        Unnamed: 7
                         object
        Unnamed: 8
        Unnamed: 9
                         object
        Unnamed: 10
                         object
        dtype: object
```

Next, i renamed the columns of the dataset to make it more relatable. And after that i deleted the columns that contains unrelevant information (the columns that contained "nan" in all its rows)

In [8]: filez.head(15)

Out[8]:

	COL1	COL2	COL3	COL4	S/N	NAME	STATUS	AMOUNT_PAID	TSHIRT_TYPE	TSHIRT_
0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
1	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
2	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
3	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
4	NaN	NaN	NaN	NaN	S/N	Name	Status	Amount Paid	T-shirt	
5	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	Туре	
6	NaN	NaN	NaN	NaN	1	Victor T. Na'Allah	Member	12000	Long Sleeve	
7	NaN	NaN	NaN	NaN	2	Olajide Mattew	Member	12000	Long Sleeve	
8	NaN	NaN	NaN	NaN	3	Abel Modu Timothy	Member	12000	Long Sleeve	
9	NaN	NaN	NaN	NaN	4	Egwim Jones Udojuaku	Member	12000	Long Sleeve	
10	NaN	NaN	NaN	NaN	5	Nwachukwu Emmanuel Benedict	Member	12000	Long Sleeve	
11	NaN	NaN	NaN	NaN	6	Adole John A.	Member	12000	Short Sleeve	
12	NaN	NaN	NaN	NaN	7	Faleti Ayodeji Peter	Member	12000	Short Sleeve	
13	NaN	NaN	NaN	NaN	8	Ayantoye Ridwan Ayomide	Member	12000	NaN	
14	NaN	NaN	NaN	NaN	9	Marvellous T. Isaac	Member	12000	Short Sleeve	

In [9]: filez1 = filez.drop(['COL1','COL2','COL3','COL4','S/N','COMMENTS'], ax
 is =1)

In [10]: filez1.head(15)

Out[10]:

	NAME	STATUS	AMOUNT_PAID	TSHIRT_TYPE	TSHIRT_AMOUNT
0	NaN	NaN	NaN	NaN	NaN
1	NaN	NaN	NaN	NaN	NaN
2	NaN	NaN	NaN	NaN	NaN
3	NaN	NaN	NaN	NaN	NaN
4	Name	Status	Amount Paid	T-shirt	NaN
5	NaN	NaN	NaN	Туре	Amount
6	Victor T. Na'Allah	Member	12000	Long Sleeve	2500
7	Olajide Mattew	Member	12000	Long Sleeve	2500
8	Abel Modu Timothy	Member	12000	Long Sleeve	2500
9	Egwim Jones Udojuaku	Member	12000	Long Sleeve	2500
10	Nwachukwu Emmanuel Benedict	Member	12000	Long Sleeve	2500
11	Adole John A.	Member	12000	Short Sleeve	2100
12	Faleti Ayodeji Peter	Member	12000	Short Sleeve	2100
13	Ayantoye Ridwan Ayomide	Member	12000	NaN	NaN
14	Marvellous T. Isaac	Member	12000	Short Sleeve	2100

In [11]: filez1.tail(10)

Out[11]:

	NAME	STATUS	AMOUNT_PAID	TSHIRT_TYPE	TSHIRT_AMOUNT
48	Shekinah Ajibola	Member	12000	Long Sleeve	2500
49	Adanu David	Member	9000	NIL	NIL
50	Oche Muscle	Member	9500	NIL	NIL
51	Ocheje Jeremiah	Member	12000	Short Sleeve	2100
52	Oguntowo Basit Ifedolapo	Member	12000	NaN	NaN
53	Simeon Iganga	Member	12000	NaN	NaN
54	Caleb Onuoja Aaron	Ex-Exco	8000	NaN	NaN
55	NaN	NaN	537500	NaN	80700
56	NaN	NaN	NaN	NaN	NaN
57	NaN	NaN	49	NaN	NaN

Next , i dropped all the rows which contains "nan" all across the dataset or unrelevant data

In [12]: filez2 = filez1.drop([0,1,2,3,4,5,55,56,57])

In [13]: filez2.head(10)

Out[13]:

	NAME	STATUS	AMOUNT_PAID	TSHIRT_TYPE	TSHIRT_AMOUNT
6	Victor T. Na'Allah	Member	12000	Long Sleeve	2500
7	Olajide Mattew	Member	12000	Long Sleeve	2500
8	Abel Modu Timothy	Member	12000	Long Sleeve	2500
9	Egwim Jones Udojuaku	Member	12000	Long Sleeve	2500
10	Nwachukwu Emmanuel Benedict	Member	12000	Long Sleeve	2500
11	Adole John A.	Member	12000	Short Sleeve	2100
12	Faleti Ayodeji Peter	Member	12000	Short Sleeve	2100
13	Ayantoye Ridwan Ayomide	Member	12000	NaN	NaN
14	Marvellous T. Isaac	Member	12000	Short Sleeve	2100
15	Shenge Raphael Saarshatar	Member	12000	Short Sleeve	2100

In [14]: filez2.tail(10)

Out[14]:

	NAME	STATUS	AMOUNT_PAID	TSHIRT_TYPE	TSHIRT_AMOUNT
45	Daleng Elisha Nandi	Member	9000	NaN	NaN
46	Ukande Aondongu Cephas	Member	12000	Long Sleeve	2500
47	De-Gold David Tarki	Member	12000	NaN	NaN
48	Shekinah Ajibola	Member	12000	Long Sleeve	2500
49	Adanu David	Member	9000	NIL	NIL
50	Oche Muscle	Member	9500	NIL	NIL
51	Ocheje Jeremiah	Member	12000	Short Sleeve	2100
52	Oguntowo Basit Ifedolapo	Member	12000	NaN	NaN
53	Simeon Iganga	Member	12000	NaN	NaN
54	Caleb Onuoja Aaron	Ex-Exco	8000	NaN	NaN

Next, I made the "NAME" column the Index label. And i dropped the column after this step

Note that this step of setting a column as an index can also be achieved by using the "set_index()" method will you'll learn in later lessons

In [15]: filez2.index = filez2["NAME"]

```
filez2.head()
In [16]:
Out[16]:
                                        NAME STATUS AMOUNT_PAID TSHIRT_TYPE TSHIRT_AMOUNT
                       NAME
               Victor T. Na'Allah
                                 Victor T. Na'Allah
                                               Member
                                                              12000
                                                                       Long Sleeve
                                                                                            2500
                Olajide Mattew
                                  Olajide Mattew
                                               Member
                                                              12000
                                                                       Long Sleeve
                                                                                            2500
            Abel Modu Timothy
                              Abel Modu Timothy
                                               Member
                                                              12000
                                                                       Long Sleeve
                                                                                            2500
                 Egwim Jones
                                   Egwim Jones
                                               Member
                                                              12000
                                                                       Long Sleeve
                                                                                            2500
                    Udojuaku
                                      Udojuaku
                  Nwachukwu
                                    Nwachukwu
                                               Member
                                                              12000
                                                                       Long Sleeve
                                                                                            2500
            Emmanuel Benedict
                              Emmanuel Benedict
           filez3 = filez2.drop("NAME", axis = "columns")
In [17]:
           filez3.head()
In [18]:
Out[18]:
                                       STATUS AMOUNT_PAID TSHIRT_TYPE TSHIRT_AMOUNT
                                NAME
                        Victor T. Na'Allah
                                       Member
                                                      12000
                                                              Long Sleeve
                                                                                    2500
                         Olajide Mattew
                                       Member
                                                      12000
                                                              Long Sleeve
                                                                                    2500
                      Abel Modu Timothy
                                                      12000
                                                              Long Sleeve
                                                                                    2500
                                       Member
                   Egwim Jones Udojuaku
                                       Member
                                                      12000
                                                              Long Sleeve
                                                                                    2500
            Nwachukwu Emmanuel Benedict Member
                                                              Long Sleeve
                                                      12000
                                                                                    2500
In [19]: filez3.info()
           <class 'pandas.core.frame.DataFrame'>
           Index: 49 entries, Victor T. Na'Allah to Caleb Onuoja Aaron
           Data columns (total 4 columns):
                               49 non-null object
           STATUS
           AMOUNT_PAID
                               48 non-null object
           TSHIRT_TYPE
                               39 non-null object
           TSHIRT_AMOUNT
                               39 non-null object
           dtypes: object(4)
```

Next i checked if there are null values on the Dataset and where excatly they are located

memory usage: 980.0+ bytes

```
In [20]: filez3.isnull().sum()
Out[20]: STATUS
                            0
         AMOUNT_PAID
                            1
         TSHIRT TYPE
                           10
         TSHIRT_AMOUNT
                           10
         dtype: int64
         filez3["AMOUNT_PAID"].head(10)
In [21]:
Out[21]: NAME
         Victor T. Na'Allah
                                          12000
         Olajide Mattew
                                          12000
         Abel Modu Timothy
                                          12000
                                          12000
         Egwim Jones Udojuaku
         Nwachukwu Emmanuel Benedict
                                          12000
         Adole John A.
                                          12000
         Faleti Ayodeji Peter
                                          12000
         Ayantoye Ridwan Ayomide
                                          12000
         Marvellous T. Isaac
                                          12000
         Shenge Raphael Saarshatar
                                          12000
         Name: AMOUNT_PAID, dtype: object
```

I filled the null values in the "AMOUNT PAID" column with 0, and set inplace to be True. And i checked to confirm if the change has been effected

```
In [22]: | filez3["AMOUNT_PAID"].fillna(0, inplace = True)
In [23]: filez3.info()
         <class 'pandas.core.frame.DataFrame'>
         Index: 49 entries, Victor T. Na'Allah to Caleb Onuoja Aaron
         Data columns (total 4 columns):
                           49 non-null object
         STATUS
         AMOUNT_PAID
                           49 non-null int64
         TSHIRT_TYPE
                           39 non-null object
         TSHIRT AMOUNT
                           39 non-null object
         dtypes: int64(1), object(3)
         memory usage: 1.1+ KB
In [24]: | filez3["TSHIRT_TYPE"].head()
Out[24]: NAME
         Victor T. Na'Allah
                                         Long Sleeve
         Olajide Mattew
                                         Long Sleeve
         Abel Modu Timothy
                                         Long Sleeve
         Egwim Jones Udojuaku
                                         Long Sleeve
         Nwachukwu Emmanuel Benedict
                                         Long Sleeve
         Name: TSHIRT_TYPE, dtype: object
```

If filled the null values contained in the "T-SHIRT TYPE" column with Long Sleeve and set inplace to True.

I replaced the null values contained in "T-SHIRT AMOUNT" accordingly

I also checked to comfirm the change has been effected

```
In [25]: filez3["TSHIRT_TYPE"].fillna("Long Sleeve", inplace = True)
In [26]: | filez3.info()
         <class 'pandas.core.frame.DataFrame'>
         Index: 49 entries, Victor T. Na'Allah to Caleb Onuoja Aaron
         Data columns (total 4 columns):
                          49 non-null object
         STATUS
         AMOUNT_PAID
                          49 non-null int64
         TSHIRT_TYPE
                          49 non-null object
         TSHIRT_AMOUNT
                          39 non-null object
         dtypes: int64(1), object(3)
         memory usage: 1.1+ KB
In [27]: | filez3["TSHIRT_AMOUNT"].head()
Out[27]: NAME
         Victor T. Na'Allah
                                         2500
         Olajide Mattew
                                         2500
         Abel Modu Timothy
                                         2500
         Egwim Jones Udojuaku
                                         2500
         Nwachukwu Emmanuel Benedict
                                         2500
         Name: TSHIRT_AMOUNT, dtype: object
In [28]: | filez3["TSHIRT_AMOUNT"].fillna(2500, inplace = True)
In [29]: filez3.info()
         <class 'pandas.core.frame.DataFrame'>
         Index: 49 entries, Victor T. Na'Allah to Caleb Onuoja Aaron
         Data columns (total 4 columns):
                          49 non-null object
         STATUS
                          49 non-null int64
         AMOUNT_PAID
                          49 non-null object
         TSHIRT TYPE
         TSHIRT_AMOUNT
                         49 non-null object
         dtypes: int64(1), object(3)
         memory usage: 1.1+ KB
```

In [30]: filez3

	SIAIUS	AMOUNT_PAID	ISHIKI_ITE	I SHIKI _AMOUNI
NAME				
Victor T. Na'Allah	Member	12000	Long Sleeve	2500
Olajide Mattew	Member	12000	Long Sleeve	2500
Abel Modu Timothy	Member	12000	Long Sleeve	2500
Egwim Jones Udojuaku	Member	12000	Long Sleeve	2500
Nwachukwu Emmanuel Benedict	Member	12000	Long Sleeve	2500
Adole John A.	Member	12000	Short Sleeve	2100
Faleti Ayodeji Peter	Member	12000	Short Sleeve	2100
Ayantoye Ridwan Ayomide	Member	12000	Long Sleeve	2500
Marvellous T. Isaac	Member	12000	Short Sleeve	2100
Shenge Raphael Saarshatar	Member	12000	Short Sleeve	2100
Reuben O.Enoch	Member	12000	Long Sleeve	2500
Mercy Ajayi	Member	12000	Long Sleeve	2500
Michael Kpoco	Ex-Exco	7000	Short Sleeve	2100
Saad	Member	12000	Long Sleeve	2500
Terzungwe Caleb	Ex-Exco	5000	Short Sleeve	2100
Faith	Member	12000	Long Sleeve	2500
Gonet Zion	Member	12000	Long Sleeve	2500
Hawwau Adeboyin Adeyemo\nFor => Jubrin Omeiza	Member	12000	Long Sleeve	2500
Nicholas Otonoku	Member	12000	Short Sleeve	2100
Timothy Ignitus Agbor	Member	12000	Long Sleeve	2500
Madumche Chidibere	Member	12000	Long Sleeve	2500
Nwokocha Ethelbert	Ex-Exco	8000	Short Sleeve	2100
Effiong Ubon Alasi	Member	12000	Long Sleeve	2500
Daniel Overcomer	Member	12000	Short Sleeve	2100
Aguwa Wisdom	Member	12000	Long Sleeve	2500
Ganiyu Mujeeb	Member	12000	Long Sleeve	2500
Hezekiel Joel	Member	12000	Long Sleeve	2500
Shitu Mustapha Ibrahim	Member	12000	Long Sleeve	2500
Orogu Francis Israel	Member	12000	Short Sleeve	2100
Agha Elizabeth	Member	12000	Short Sleeve	2100
Muhammed Zainab	Member	12000	Long Sleeve	2500
Isaac Priscilla	Member	12000	Short Sleeve	2100
Paul Elizabeth Ladi	Member	12000	Short Sleeve	2100
Omaji Samuel Owoicho	Ex-Exco	8000	Short Sleeve	2100

STATUS AMOUNT_PAID TSHIRT_TYPE TSHIRT_AMOUNT

м			A	_
N	Δ	n	/1	-

Esinome Abraham	Member	12000	Short Sleeve	2100
Umeh Audu Ayigba	Member	12000	Short Sleeve	2100
Sarah Kauna Edoja	Member	8000	Long Sleeve	2500
Ibrahim Hussein Chado	Member	10000	NIL	NIL
Fatima Ganiyu	Member	0	NIL	NIL
Daleng Elisha Nandi	Member	9000	Long Sleeve	2500
Ukande Aondongu Cephas	Member	12000	Long Sleeve	2500
De-Gold David Tarki	Member	12000	Long Sleeve	2500
Shekinah Ajibola	Member	12000	Long Sleeve	2500
Adanu David	Member	9000	NIL	NIL
Oche Muscle	Member	9500	NIL	NIL
Ocheje Jeremiah	Member	12000	Short Sleeve	2100
Oguntowo Basit Ifedolapo	Member	12000	Long Sleeve	2500
Simeon Iganga	Member	12000	Long Sleeve	2500
Caleb Onuoja Aaron	Ex-Exco	8000	Long Sleeve	2500
<pre>In [31]: filez3["TSHIRT_TYPE"].unique(</pre>)			
<pre>Out[31]: array(['Long Sleeve', 'Short</pre>	Sleeve',	'NIL'], d	type=object)

```
Checking the info of the Dataset, it's revealed that there are some values that are wrong. Like "NIL", and they are replaced accordingly using the replace function.
```

In [32]: filez3["TSHIRT_AMOUNT"].unique()

Out[32]: array([2500, 2100, 'NIL'], dtype=object)

Note that this not a null value and requires a different treatment from "nan". If it were to be null values, "dropna" / "fillna" wolud have taken care of it

```
In [33]: filez3["TSHIRT_TYPE"].replace({"NIL" : "No Sleeve"}, inplace = True)
In [34]: filez3["TSHIRT_AMOUNT"].replace({"NIL" : 0}, inplace = True)
```

In [35]: filez3

	SIAIUS	AMOUNT_PAID	ISHIKI_ITE	I SHIKI _AMOUNI
NAME				
Victor T. Na'Allah	Member	12000	Long Sleeve	2500
Olajide Mattew	Member	12000	Long Sleeve	2500
Abel Modu Timothy	Member	12000	Long Sleeve	2500
Egwim Jones Udojuaku	Member	12000	Long Sleeve	2500
Nwachukwu Emmanuel Benedict	Member	12000	Long Sleeve	2500
Adole John A.	Member	12000	Short Sleeve	2100
Faleti Ayodeji Peter	Member	12000	Short Sleeve	2100
Ayantoye Ridwan Ayomide	Member	12000	Long Sleeve	2500
Marvellous T. Isaac	Member	12000	Short Sleeve	2100
Shenge Raphael Saarshatar	Member	12000	Short Sleeve	2100
Reuben O.Enoch	Member	12000	Long Sleeve	2500
Mercy Ajayi	Member	12000	Long Sleeve	2500
Michael Kpoco	Ex-Exco	7000	Short Sleeve	2100
Saad	Member	12000	Long Sleeve	2500
Terzungwe Caleb	Ex-Exco	5000	Short Sleeve	2100
Faith	Member	12000	Long Sleeve	2500
Gonet Zion	Member	12000	Long Sleeve	2500
Hawwau Adeboyin Adeyemo\nFor => Jubrin Omeiza	Member	12000	Long Sleeve	2500
Nicholas Otonoku	Member	12000	Short Sleeve	2100
Timothy Ignitus Agbor	Member	12000	Long Sleeve	2500
Madumche Chidibere	Member	12000	Long Sleeve	2500
Nwokocha Ethelbert	Ex-Exco	8000	Short Sleeve	2100
Effiong Ubon Alasi	Member	12000	Long Sleeve	2500
Daniel Overcomer	Member	12000	Short Sleeve	2100
Aguwa Wisdom	Member	12000	Long Sleeve	2500
Ganiyu Mujeeb	Member	12000	Long Sleeve	2500
Hezekiel Joel	Member	12000	Long Sleeve	2500
Shitu Mustapha Ibrahim	Member	12000	Long Sleeve	2500
Orogu Francis Israel	Member	12000	Short Sleeve	2100
Agha Elizabeth	Member	12000	Short Sleeve	2100
Muhammed Zainab	Member	12000	Long Sleeve	2500
Isaac Priscilla	Member	12000	Short Sleeve	2100
Paul Elizabeth Ladi	Member	12000	Short Sleeve	2100
Omaji Samuel Owoicho	Ex-Exco	8000	Short Sleeve	2100

STATUS AMOUNT_PAID TSHIRT_TYPE TSHIRT_AMOUNT

Esinome Abraham	Member	12000	Short Sleeve	2100
Umeh Audu Ayigba	Member	12000	Short Sleeve	2100
Sarah Kauna Edoja	Member	8000	Long Sleeve	2500
Ibrahim Hussein Chado	Member	10000	No Sleeve	0
Fatima Ganiyu	Member	0	No Sleeve	0
Daleng Elisha Nandi	Member	9000	Long Sleeve	2500
Ukande Aondongu Cephas	Member	12000	Long Sleeve	2500
De-Gold David Tarki	Member	12000	Long Sleeve	2500
Shekinah Ajibola	Member	12000	Long Sleeve	2500
Adanu David	Member	9000	No Sleeve	0
Oche Muscle	Member	9500	No Sleeve	0
Ocheje Jeremiah	Member	12000	Short Sleeve	2100
Oguntowo Basit Ifedolapo	Member	12000	Long Sleeve	2500
Simeon Iganga	Member	12000	Long Sleeve	2500
Caleb Onuoja Aaron	Ex-Exco	8000	Long Sleeve	2500

The file is ready for analysis, visualization or any other process.

I checked a few of its properties to double check all I've done.

```
In [37]:
           filez3.describe()
Out[37]:
                 AMOUNT_PAID TSHIRT_AMOUNT
                                    49.000000
           count
                     49.000000
           mean
                  10969.387755
                                  2157.142857
             std
                   2319.321388
                                   676.387463
             min
                      0.000000
                                     0.000000
             25%
                  12000.000000
                                  2100.000000
                                  2500.000000
             50%
                  12000.000000
             75%
                  12000.000000
                                  2500.000000
                  12000.000000
            max
                                  2500.000000
In [38]:
           filez3.shape
Out[38]: (49, 4)
In [39]:
           filez3.size
Out[39]: 196
In [40]: | filez3.dtypes
Out[40]:
          STATUS
                               object
           AMOUNT_PAID
                                int64
           TSHIRT_TYPE
                               object
           TSHIRT_AMOUNT
                                int64
           dtype: object
In [41]: | filez3.ndim
Out[41]: 2
```

Now, you can write the file back into a document. In this case, i choose to write it back to an excel file

```
In [42]: filez3.to_excel("ExcurPort Document.xlsx")
In [ ]:
```

This document has been successfully prepared for analysis. And I'm really excited $\stackrel{\hookleftarrow}{\hookrightarrow} \stackrel{\hookleftarrow}{\hookrightarrow}$ about that. It's also been successfully written back to an excel file. And that's another giant feat achieved. I'll keep the document safe for visualization analysis when I'm done and ready with Matplotlib. I thank God for this that I've been able to achieve.

ThankfulHeart.

GratefulHeart

JourneyToGreatAndExtraordinaryFeats.

TheBecomingOfAWorldReveredDataScientist

TheMakingOfADataAnalyst

This brings this lesson to an end. The best way to learn is by doing, so get started and get practicing. It's only a matter of improved effort and you'd have developed your skills to take on giant projects.

Wishing you Goodspeed and Happy Learning

In	E]:	
In	[]:	
In	Ε]:	