DATA MANIPULATION

In [2]: #Name : Shreya Sharma

#Roll no. : 46 #Sectin : 3B #Date : 26/07/2024

In [4]: #Aim : To perform operation on Data manipulation

In [1]: import pandas as pd

In [3]: import os

In [5]: os.getcwd()

Out[5]: 'C:\\Users\\pravi'

In [7]: os.chdir('C:\\Users\\pravi\\Desktop')

In [9]: df=pd.read_csv("titanic.csv")

In [11]: df

Out[11]: pclass survived name sex sibsp parch ticket fare cabin embarked boat body home.dest Allen, Miss. St Louis, 0 1.0 1.0 Elisabeth female 29.0000 0.0 0.0 24160 211.3375 **B**5 S 2 NaN MO Walton Allison, Montreal, Master. C22 PQ/ 1 1.0 1.0 0.9167 2.0 113781 151.5500 S male 1.0 11 NaN Chesterville, Hudson C26 Trevor ON Montreal, Allison, C22 PQ / 2 1.0 0.0 Miss. Helen 2.0000 1.0 2.0 113781 151.5500 female S NaN NaN Chesterville, C26 Loraine ON Allison, Mr. Montreal, Hudson C22 PQ / 3 1.0 0.0 male 30.0000 1.0 2.0 113781 151.5500 S NaN 135.0 Chesterville, Joshua C26 Creighton ON Allison, Mrs. Montreal, Hudson J C C22 PQ/ 0.0 1.0 (Bessie female 25.0000 1.0 2.0 113781 151.5500 S NaN NaN C26 Chesterville, Waldo ON Daniels) Zabour. 1305 3.0 0.0 female NaN 1.0 0.0 2665 14.4542 NaN C NaN NaN NaN Miss. Thamine Zakarian, 1306 3.0 0.0 male 26.5000 0.0 0.0 2656 7.2250 C NaN 304.0 Mr. NaN NaN Mapriededer Zakarian, 7.2250 C NaN 1307 3.0 0.0 male 27.0000 0.0 0.0 2670 NaN NaN NaN Mr. Ortin Zimmerman, 1308 3.0 0.0 male 29.0000 0.0 0.0 315082 7.8750 NaN NaN S NaN NaN Mr. Leo 1309 NaN NaN

1310 rows × 14 columns

In [13]: df.head()

Out[13]:		pclass	survived	name	sex	age	sibsp	parch	ticket	fare	cabin	embarked	boat	body	home.dest
	0	1.0	1.0	Allen, Miss. Elisabeth Walton	female	29.0000	0.0	0.0	24160	211.3375	B5	S	2	NaN	St Louis, MO
	1	1.0	1.0	Allison, Master. Hudson Trevor	male	0.9167	1.0	2.0	113781	151.5500	C22 C26	S	11	NaN	Montreal, PQ / Chesterville, ON
	2	1.0	0.0	Allison, Miss. Helen Loraine	female	2.0000	1.0	2.0	113781	151.5500	C22 C26	S	NaN	NaN	Montreal, PQ / Chesterville, ON
	3	1.0	0.0	Allison, Mr. Hudson Joshua Creighton	male	30.0000	1.0	2.0	113781	151.5500	C22 C26	S	NaN	135.0	Montreal, PQ / Chesterville, ON
	4	1.0	0.0	Allison, Mrs. Hudson J C (Bessie Waldo Daniels)	female	25.0000	1.0	2.0	113781	151.5500	C22 C26	S	NaN	NaN	Montreal, PQ / Chesterville, ON

In [15]: df.tail()

Out[15]: pclass survived sibsp parch ticket fare cabin embarked boat body home.dest name sex age Zabour, Miss. 1305 3.0 0.0 2665 NaN female NaN 1.0 0.0 14.4542 NaN C NaN NaN Thamine Zakarian, Mr. 1306 3.0 0.0 26.5 0.0 0.0 2656 7.2250 С 304.0 NaN male NaN NaN Mapriededer Zakarian, Mr. 1307 3.0 0.0 male 27.0 0.0 0.0 2670 7.2250 NaN С NaN NaN NaN Ortin Zimmerman, 1308 3.0 0.0 male 29.0 0.0 0.0 315082 7.8750 NaN NaN NaN NaN Mr. Leo 1309 NaN NaN

In [17]: df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1310 entries, 0 to 1309
Data columns (total 14 columns):

#	Column	Non-Null Count	Dtype
0	pclass	1309 non-null	float64
1	survived	1309 non-null	float64
2	name	1309 non-null	object
3	sex	1309 non-null	object
4	age	1046 non-null	float64
5	sibsp	1309 non-null	float64
6	parch	1309 non-null	float64
7	ticket	1309 non-null	object
8	fare	1308 non-null	float64
9	cabin	295 non-null	object
10	embarked	1307 non-null	object
11	boat	486 non-null	object
12	body	121 non-null	float64
13	home.dest	745 non-null	object
ar .		(7)	

dtypes: float64(7), object(7)
memory usage: 143.4+ KB

In [19]: df.describe()

Out[19]:

	pclass	survived	age	sibsp	parch	fare	body
count	1309.000000	1309.000000	1046.000000	1309.000000	1309.000000	1308.000000	121.000000
mean	2.294882	0.381971	29.881135	0.498854	0.385027	33.295479	160.809917
std	0.837836	0.486055	14.413500	1.041658	0.865560	51.758668	97.696922
min	1.000000	0.000000	0.166700	0.000000	0.000000	0.000000	1.000000
25%	2.000000	0.000000	21.000000	0.000000	0.000000	7.895800	72.000000
50%	3.000000	0.000000	28.000000	0.000000	0.000000	14.454200	155.000000
75%	3.000000	1.000000	39.000000	1.000000	0.000000	31.275000	256.000000
max	3.000000	1.000000	80.000000	8.000000	9.000000	512.329200	328.000000

```
Out[21]: (1310, 14)
In [23]: df.size
Out[23]: 18340
In [25]: df.ndim
Out[25]: 2
In [27]: df.columns
dtype='object')
In [29]: df.drop(labels='age',axis=1)
Out[29]:
               pclass survived
                                                                                 fare cabin embarked boat
                                                                                                                  home.dest
                                           name
                                                   sex
                                                        sibsp parch
                                                                      ticket
                                                                                                           body
                                      Allen, Miss.
                                                                                                                    St Louis,
             0
                                                          0.0
                                                                      24160 211.3375
                                                                                        B5
                                                                                                   S
                                                                                                         2
                  1.0
                           1.0
                                                 female
                                                                 0.0
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                                  Elisabeth Walton
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                                    Allison, Master.
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             1
                  1.0
                           1.0
                                                          1.0
                                                                 2.0 113781 151.5500
                                                                                                   S
                                                                                                            NaN
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                                    Hudson Trevor
                                                                                       C26
                                                                                                                 Chesterville,
                                                                                                                        ON
                                                                                                                    Montreal,
                                Allison, Miss. Helen
                                                                                       C22
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             2
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                                                                 2.0 113781 151.5500
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                                         Loraine
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                                                                                                                        ON
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                                Allison, Mr. Hudson
                                                                                       C22
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             3
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                                                                 2.0 113781 151.5500
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                                  Joshua Creighton
                                                                                       C26
                                                                                                                 Chesterville,
                                                                                                                    Montreal,
                                      Allison, Mrs.
                                                                                       C22
                                                                                                                       PQ/
                  1.0
                                                                 2.0 113781 151.5500
                           0.0
                                Hudson J C (Bessie
                                                 female
                                                          1.0
                                                                                                      NaN
                                                                                                            NaN
                                                                                                                 Chesterville,
                                                                                       C26
                                    Waldo Daniels)
                                                                                                                        ON
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                                     Zabour, Miss.
          1305
                  3.0
                           0.0
                                                 female
                                                          1.0
                                                                 0.0
                                                                       2665
                                                                              14.4542
                                                                                       NaN
                                                                                                      NaN
                                                                                                            NaN
                                                                                                                        NaN
                                        Thamine
                                     Zakarian, Mr.
          1306
                  3.0
                           0.0
                                                   male
                                                          0.0
                                                                 0.0
                                                                       2656
                                                                               7.2250
                                                                                       NaN
                                                                                                   C NaN
                                                                                                           304.0
                                                                                                                        NaN
                                     Mapriededer
          1307
                  3.0
                           0.0
                                 Zakarian, Mr. Ortin
                                                          0.0
                                                                 0.0
                                                                       2670
                                                                               7.2250
                                                                                       NaN
                                                                                                      NaN
                                                                                                            NaN
                                                                                                                        NaN
                                                  male
                                   Zimmerman, Mr.
          1308
                  3.0
                           0.0
                                                          0.0
                                                                 0.0 315082
                                                                               7.8750
                                                                                       NaN
                                                                                                            NaN
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                                                   male
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                                      Leo
          1309
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                                                                       NaN
                                                                                NaN
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                                                                                                 NaN NaN
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```

1310 rows × 13 columns

In [31]: df.drop(labels=2,axis=0)

In [21]: df.shape

home.dest	body	boat	embarked	cabin	fare	ticket	parch	sibsp	age	sex	name	survived	pclass	
St Louis, MO	NaN	2	S	B5	211.3375	24160	0.0	0.0	29.0000	female	Allen, Miss. Elisabeth Walton	1.0	1.0	0
Montreal, PQ / Chesterville, ON	NaN	11	S	C22 C26	151.5500	113781	2.0	1.0	0.9167	male	Allison, Master. Hudson Trevor	1.0	1.0	1
Montreal, PQ / Chesterville, ON	135.0	NaN	S	C22 C26	151.5500	113781	2.0	1.0	30.0000	male	Allison, Mr. Hudson Joshua Creighton	0.0	1.0	3
Montreal, PQ / Chesterville, ON	NaN	NaN	S	C22 C26	151.5500	113781	2.0	1.0	25.0000	female	Allison, Mrs. Hudson J C (Bessie Waldo Daniels)	0.0	1.0	4
New York, NY	NaN	3	S	E12	26.5500	19952	0.0	0.0	48.0000	male	Anderson, Mr. Harry	1.0	1.0	5
NaN	NaN	NaN	С	NaN	14.4542	2665	0.0	1.0	NaN	female	Zabour, Miss. Thamine	0.0	3.0	1305
NaN	304.0	NaN	С	NaN	7.2250	2656	0.0	0.0	26.5000	male	Zakarian, Mr. Mapriededer	0.0	3.0	1306
NaN	NaN	NaN	С	NaN	7.2250	2670	0.0	0.0	27.0000	male	Zakarian, Mr. Ortin	0.0	3.0	1307
NaN	NaN	NaN	S	NaN	7.8750	315082	0.0	0.0	29.0000	male	Zimmerman, Mr. Leo	0.0	3.0	1308
NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1309

1309 rows × 14 columns

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