In [ ]:
```
#Import libraries
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import statistics as stats
```

In [ ]:
```
#Load dataset
df=sns.load_dataset("titanic")
```

In [ ]:
```
df.head()
```

Out[ ]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN

In [ ]:
```
#Mean of entire dataset columns
df.mean(axis=1)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\3676274908.py:1: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.mean(axis=1)
```

Out[ ]:
```
0       4.281250
1      14.035412
2       4.865625
3      11.387500
4       6.006250
          ...
886     5.500000
887     6.500000
888     4.207143
889     7.500000
890     5.593750
Length: 891, dtype: float64
```

In [ ]:
```
#Mean of entire dataset rows
df.mean(axis=0)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\1937374207.py:1: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.mean(axis=0)
```

Out[ ]:
```
survived       0.383838
pclass         2.308642
age           29.699118
sibsp          0.523008
parch          0.381594
fare          32.204208
adult_male     0.602694
alone          0.602694
dtype: float64
```

In [ ]:
```
#Median of entire dataset columns
df.median(axis=1)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\35696959.py:2: FutureWarnin
g: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None') is
deprecated; in a future version this will raise TypeError.  Select only valid columns
before calling the reduction.
  df.median(axis=1)
```

Out[ ]:
```
0      1.0
1      1.0
2      1.0
3      1.0
4      1.0
      ...
886    1.0
887    1.0
888    1.0
889    1.0
890    1.0
Length: 891, dtype: float64
```

In [ ]:
```
#Median of entire dataset rows
df.median(axis=0)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\4227709204.py:2: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.median(axis=0)
```

Out[ ]:
```
survived       0.0000
pclass         3.0000
age           28.0000
sibsp          0.0000
parch          0.0000
fare          14.4542
adult_male     1.0000
alone          1.0000
dtype: float64
```

In [ ]:
```
#STD of entire dataset columns
df.std(axis=1)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\2108637489.py:2: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.std(axis=1)
```

Out[ ]:
```
0       7.568069
1      26.598513
2       8.947555
3      20.737160
4      12.024987
         ...
886     9.724784
887    11.501553
888     8.563509
889    12.705454
890    10.985329
Length: 891, dtype: float64
```

In [ ]:
```
#STD of entire dataset rows
df.std(axis=0)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\2309337113.py:2: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.std(axis=0)
```

Out[ ]:
```
survived       0.486592
pclass         0.836071
age           14.526497
sibsp          1.102743
parch          0.806057
fare          49.693429
adult_male     0.489615
alone          0.489615
dtype: float64
```

In [ ]:
```
#S.E of entire dataset columns
df.sem(axis=1)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\3972330827.py:2: FutureWarn
ing: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None')
is deprecated; in a future version this will raise TypeError.  Select only valid colu
mns before calling the reduction.
  df.sem(axis=1)
```

Out[ ]:
```
0      2.675716
1      9.403995
2      3.163438
3      7.331693
4      4.251475
         ...
886    3.438230
887    4.066413
888    3.236702
889    4.492056
890    3.883900
Length: 891, dtype: float64
```

In [ ]:
```
#S.E of entire dataset rows
df.sem(axis=0)
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\3643551444.py:2: FutureWa
rning: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=Non
e') is deprecated; in a future version this will raise TypeError.  Select only vali
d columns before calling the reduction.
  df.sem(axis=0)
```

Out[ ]:
```
survived      0.016301
pclass        0.028009
age           0.543640
sibsp         0.036943
parch         0.027004
fare          1.664792
adult_male    0.016403
alone         0.016403
dtype: float64
```

In [ ]:
```
#Mode
print("Mode of given data set is % s" % (stats.mode("titanic")))
```

```
Mode of given data set is t
```

In [ ]:
```
#Mean of specified column
df2 = df["pclass"].mean()
df2
```

Out[ ]:
```
2.308641975308642
```

In [ ]:
```
#Mean of entire columns
df2 = df.mean()
df2
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\99167482.py:1: FutureWarnin
g: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None') is
deprecated; in a future version this will raise TypeError.  Select only valid columns
before calling the reduction.
  df2 = df.mean()
```

Out[ ]:
```
survived       0.383838
pclass         2.308642
age           29.699118
sibsp          0.523008
parch          0.381594
fare          32.204208
adult_male     0.602694
alone          0.602694
dtype: float64
```

In [ ]:
```
# Using multiple columns mean using DataFrame.mean()
df3 = df[["age","survived"]].mean()
df3
```

Out[ ]:
```
age         29.699118
survived     0.383838
dtype: float64
```

In [ ]:
```
# Find the mean including NaN values using DataFrame.mean()
df4 = df.mean(axis=0, skipna=False)
df4
```

```
C:\Users\Muhammad Afaq\AppData\Local\Temp\ipykernel_11516\177216332.py:2: FutureWarni
ng: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None') i
s deprecated; in a future version this will raise TypeError.  Select only valid colum
ns before calling the reduction.
  df4 = df.mean(axis=0, skipna=False)
```

Out[ ]:
```
survived       0.383838
pclass         2.308642
age                 NaN
sibsp          0.523008
parch          0.381594
fare          32.204208
adult_male     0.602694
alone          0.602694
dtype: float64
```

In [ ]:
```
# Using DataFrame.describe() method
df = df.describe()
df
```

Out[ ]:

	survived	pclass	age	sibsp	parch	fare
count	891.000000	891.000000	714.000000	891.000000	891.000000	891.000000
mean	0.383838	2.308642	29.699118	0.523008	0.381594	32.204208
std	0.486592	0.836071	14.526497	1.102743	0.806057	49.693429
min	0.000000	1.000000	0.420000	0.000000	0.000000	0.000000
25%	0.000000	2.000000	20.125000	0.000000	0.000000	7.910400
50%	0.000000	3.000000	28.000000	0.000000	0.000000	14.454200
75%	1.000000	3.000000	38.000000	1.000000	0.000000	31.000000
max	1.000000	3.000000	80.000000	8.000000	6.000000	512.329200