Task2 #Need to include these data in excel #then select the column and o to home go to filter and then go to advanced select duplicates then highlight the duplicates #then execute the query: =IFERROR(INDEX(A3, MATCH(0, COUNTIF(B$1, A3:A12)+IF(COUNTIF(A3:A12, A3:A12)>1, 0, 1), 0)), ""

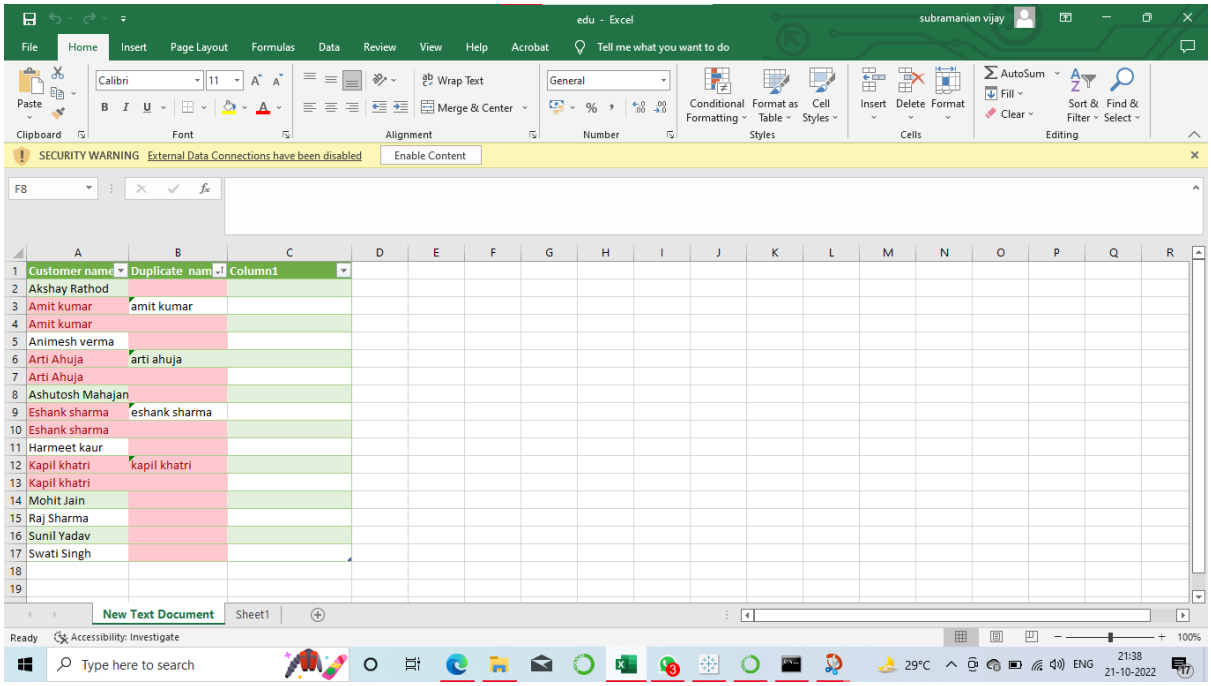
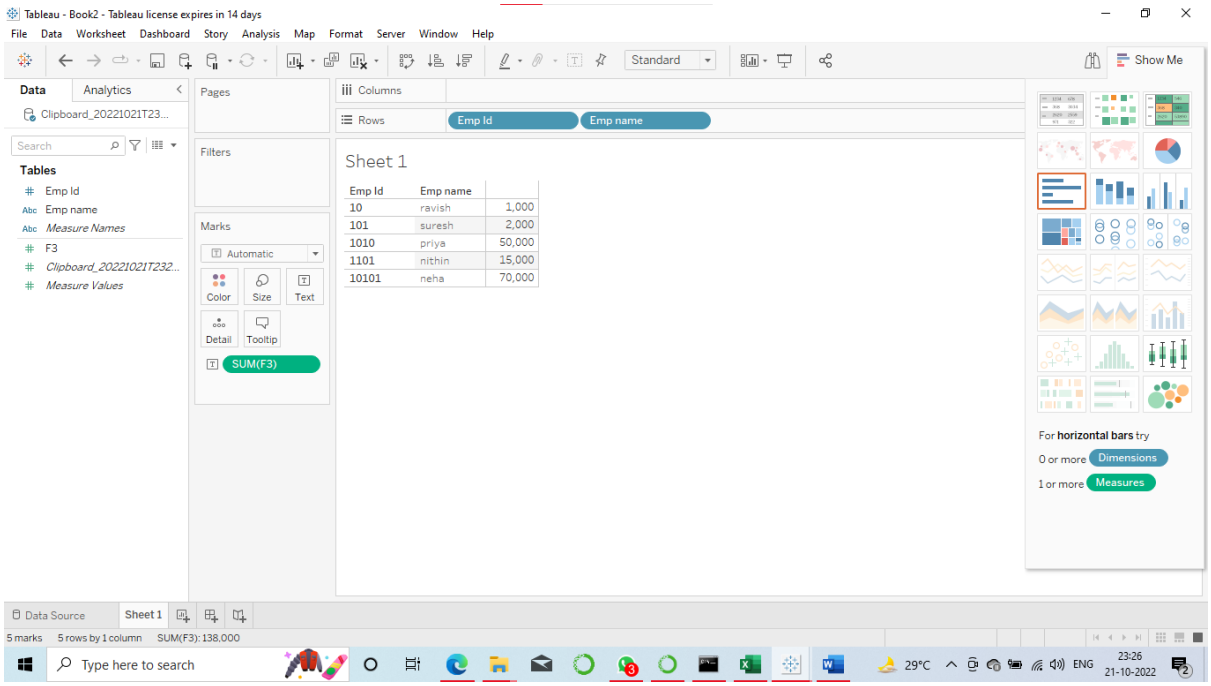
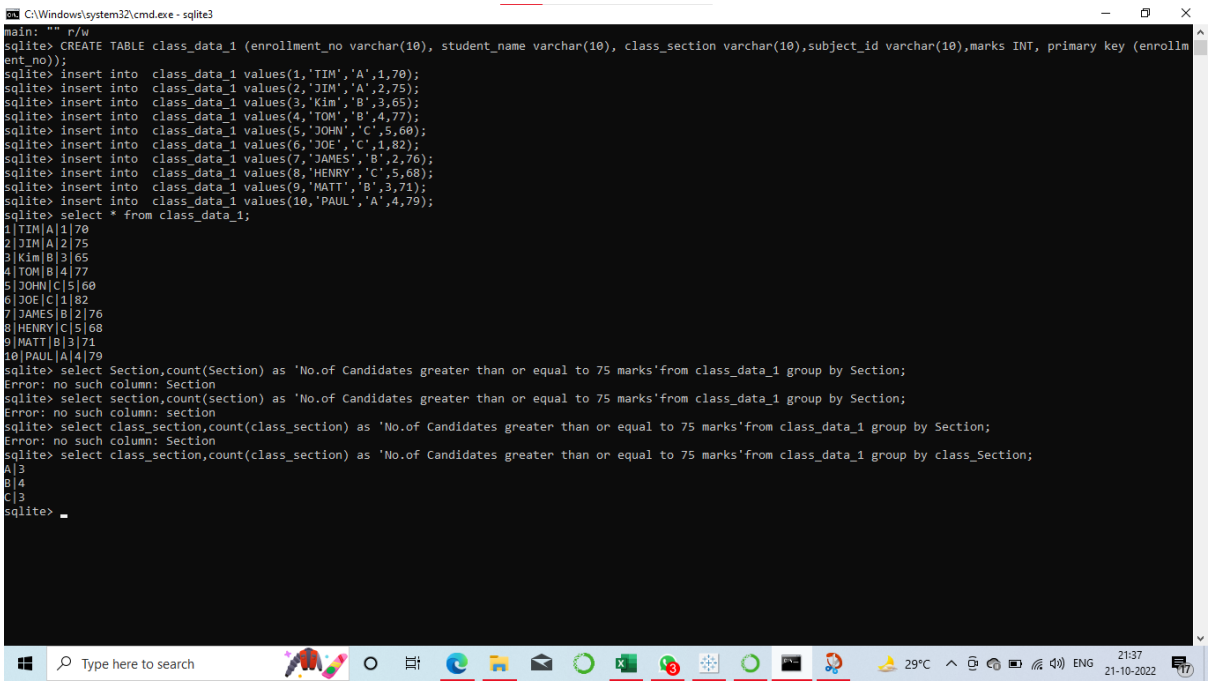


Tableau #Save the data in a csv file format #Import the data to the working sheet #Go to sheet 1 #Drag emp name and id #Right click on the id on the left side #a drop down box is appear #Rename that dialogue box type LEFT("0000000",(7-LEN(STR[ID])+STR([ID])



At St. Xavier's College, a Faculty has the following data in My SQL in database named as Class having table student related to Semester Examination

table student related to Semester Examination Enrollment No. Student Name Section Subject Id Marks 1 Tim A 1 70 2 Jim A 2 75 3 Kim B 3 65 4 Tom B 4 77 5 John C 5 60 6 Joe C 1 82 7 James B 2 76 8 Henry C 5 68 9 Matt B 3 71 10 Paul A 4 79



The Faculty needs a section-wise Number of candidates who have secured more than or equal to 75 marks in the Semester Exam. Note: Enrollment No. is declared as Primary Key

Fatal prediction using KNN Classifier Importing required libraries

In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn import svm
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')
```

In [2]:
```
df=pd.read_csv("C:\\Users\\Hi\\OneDrive\\Desktop\\train.csv")
df.head()
```

Out[2]:

	baseline value	accelerations	fetal_movement	uterine_contractions	light_decelerations	severe_decelerations	prolongued_decelerations	abnormal_short_term_variab
0	142.0	0.000	0.000	0.007	0.000	0.0	0.0	
1	122.0	0.000	0.000	0.006	0.002	0.0	0.0	
2	129.0	0.005	0.003	0.001	0.000	0.0	0.0	
3	136.0	0.006	0.000	0.008	0.000	0.0	0.0	
4	144.0	0.000	0.000	0.006	0.000	0.0	0.0	

5 rows × 22 columns

```
df.describe()
```

	baseline value	accelerations	fetal_movement	uterine_contractions	light_dec
count	1700.000000	1700.000000	1700.000000	1700.000000	17
mean	133.213529	0.003212	0.010211	0.004356	
std	9.873344	0.003888	0.050124	0.002943	
min	106.000000	0.000000	0.000000	0.000000	
25%	126.000000	0.000000	0.000000	0.002000	
50%	133.000000	0.002000	0.000000	0.004000	
75%	140.000000	0.006000	0.003000	0.006000	
max	159.000000	0.019000	0.481000	0.015000	

```
df.shape
```

```
(1700, 22)
```

```
df.isna().sum()
```

```
baseline value                                                  0
accelerations                                                   0
fetal_movement                                                  0
uterine_contractions                                            0
light_decelerations                                             0
severe_decelerations                                            0
prolongued_decelerations                                        0
abnormal_short_term_variability                                 0
mean_value_of_short_term_variability                            0
percentage_of_time_with_abnormal_long_term_variability          0
mean_value_of_long_term_variability                             0
histogram_width                                                 0
histogram_min                                                   0
histogram_max                                                   0
histogram_number_of_peaks                                       0
histogram_number_of_zeroes                                      0
histogram_mode                                                  0
histogram_mean                                                  0
histogram_median                                                0
histogram_variance                                              0
histogram_tendency                                              0
fetal_health                                                    0
dtype: int64
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1700 entries, 0 to 1699
Data columns (total 22 columns):
 #   Column                                                  Non-Null Count  Dtype  
---  ------                                                  --------------  -----  
 0   baseline value                                          1700 non-null   float64
 1   accelerations                                           1700 non-null   float64
 2   fetal_movement                                          1700 non-null   float64
 3   uterine_contractions                                    1700 non-null   float64
 4   light_decelerations                                     1700 non-null   float64
 5   severe_decelerations                                    1700 non-null   float64
 6   prolongued_decelerations                                1700 non-null   float64
 7   abnormal_short_term_variability                         1700 non-null   float64
 8   mean_value_of_short_term_variability                    1700 non-null   float64
 9   percentage_of_time_with_abnormal_long_term_variability  1700 non-null   float64
 10  mean_value_of_long_term_variability                     1700 non-null   float64
 11  histogram_width                                         1700 non-null   float64
 12  histogram_min                                           1700 non-null   float64
 13  histogram_max                                           1700 non-null   float64
 14  histogram_number_of_peaks                               1700 non-null   float64
 15  histogram_number_of_zeroes                              1700 non-null   float64
 16  histogram_mode                                          1700 non-null   float64
 17  histogram_mean                                          1700 non-null   float64
 18  histogram_median                                        1700 non-null   float64
 19  histogram_variance                                      1700 non-null   float64
 20  histogram_tendency                                      1700 non-null   float64
 21  fetal_health                                            1700 non-null   float64
dtypes: float64(22)
```

```
df.describe()
```

	baseline value	accelerations	fetal_movement	uterine_contractions	light_dec
count	1700.000000	1700.000000	1700.000000	1700.000000	17
mean	133.213529	0.003212	0.010211	0.004356	
std	9.873344	0.003888	0.050124	0.002943	
min	106.000000	0.000000	0.000000	0.000000	
25%	126.000000	0.000000	0.000000	0.002000	
50%	133.000000	0.002000	0.000000	0.004000	
75%	140.000000	0.006000	0.003000	0.006000	
max	159.000000	0.019000	0.481000	0.015000	

```
df.shape
```

```
(1700, 22)
```

```
df.isna().sum()
```

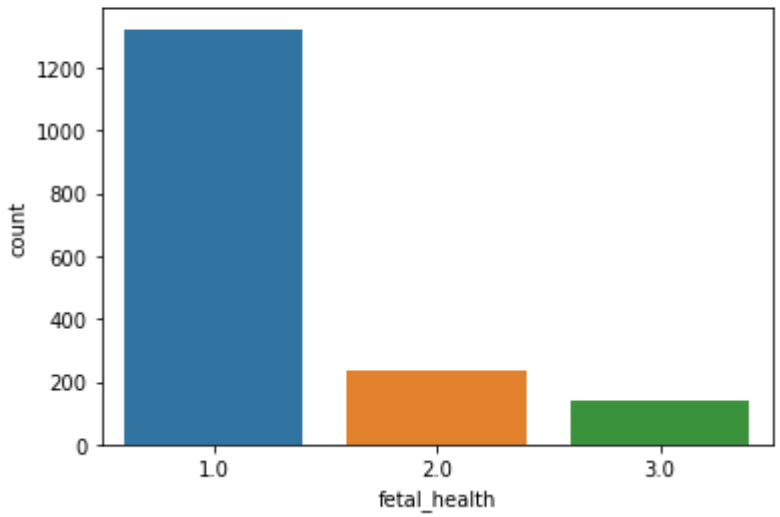
```
baseline value                                                  0
accelerations                                                   0
fetal_movement                                                  0
uterine_contractions                                            0
light_decelerations                                             0
severe_decelerations                                            0
prolongued_decelerations                                        0
abnormal_short_term_variability                                 0
mean_value_of_short_term_variability                            0
percentage_of_time_with_abnormal_long_term_variability          0
mean_value_of_long_term_variability                             0
histogram_width                                                 0
histogram_min                                                   0
histogram_max                                                   0
histogram_number_of_peaks                                       0
histogram_number_of_zeroes                                      0
histogram_mode                                                  0
histogram_mean                                                  0
histogram_median                                                0
histogram_variance                                              0
histogram_tendency                                              0
fetal_health                                                    0
dtype: int64
```

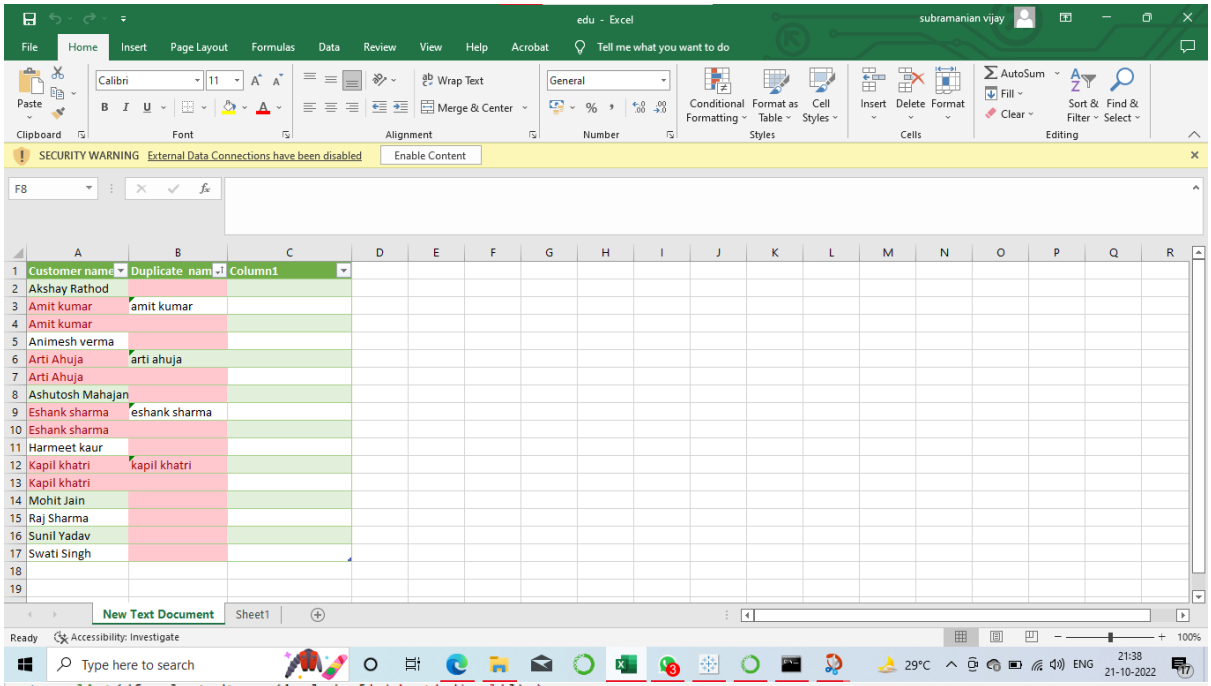
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1700 entries, 0 to 1699
Data columns (total 22 columns):
 #   Column                                                  Non-Null Count  Dtype  
---  ------                                                  --------------  -----  
 0   baseline value                                          1700 non-null   float64
 1   accelerations                                           1700 non-null   float64
 2   fetal_movement                                          1700 non-null   float64
 3   uterine_contractions                                    1700 non-null   float64
 4   light_decelerations                                     1700 non-null   float64
 5   severe_decelerations                                    1700 non-null   float64
 6   prolongued_decelerations                                1700 non-null   float64
 7   abnormal_short_term_variability                         1700 non-null   float64
 8   mean_value_of_short_term_variability                    1700 non-null   float64
 9   percentage_of_time_with_abnormal_long_term_variability  1700 non-null   float64
 10  mean_value_of_long_term_variability                     1700 non-null   float64
 11  histogram_width                                         1700 non-null   float64
 12  histogram_min                                           1700 non-null   float64
 13  histogram_max                                           1700 non-null   float64
 14  histogram_number_of_peaks                               1700 non-null   float64
 15  histogram_number_of_zeroes                              1700 non-null   float64
 16  histogram_mode                                          1700 non-null   float64
 17  histogram_mean                                          1700 non-null   float64
 18  histogram_median                                        1700 non-null   float64
 19  histogram_variance                                      1700 non-null   float64
 20  histogram_tendency                                      1700 non-null   float64
 21  fetal_health                                            1700 non-null   float64
dtypes: float64(22)
```

```
sns.countplot(df.fetal_health)
```

```
<AxesSubplot:xlabel='fetal_health', ylabel='count'>
```



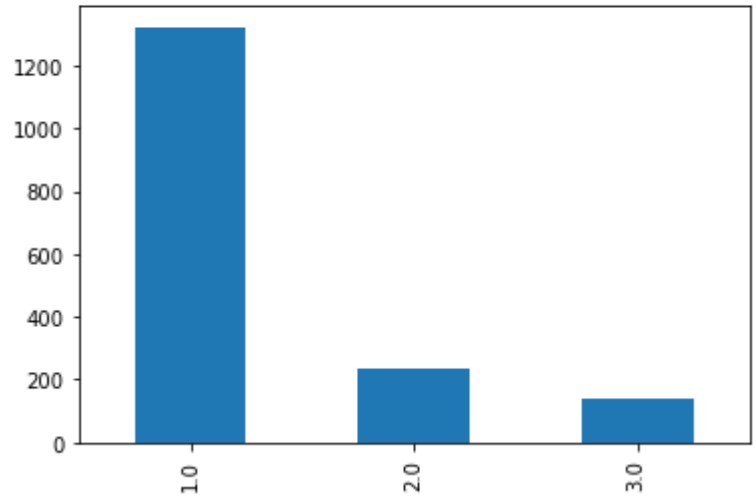



```
cats = list(df.select_dtypes(include=['object','bool']) )
nums = list(df.select_dtypes(include=['int64','float64']))
print(cats)
print(nums)
```

```
[]
['baseline value', 'accelerations', 'fetal_movement', 'uterine_contractions', 'light_decelerations', 'severe_decelerations', 'prolongued_decelerations', 'abnormal_short_term_variability', 'mean_value_of_short_term_variability', 'percentage_of_time_with_abnormal_long_term_variability', 'mean_value_of_long_term_variability', 'histogram_width', 'histogram_min', 'histogram_max', 'histogram_number_of_peaks', 'histogram_number_of_zeroes', 'histogram_mode', 'histogram_mean', 'histogram_median', 'histogram_variance', 'histogram_tendency', 'fetal_health']
```

```
df['fetal_health'].value_counts().plot(kind='bar')
```

```
<AxesSubplot:>
```



In [1]:
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import numpy as np
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from sklearn import svm
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df=pd.read_csv("C:\\Users\\Hi\\OneDrive\\Desktop\\train.csv")
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5 rows × 22 columns

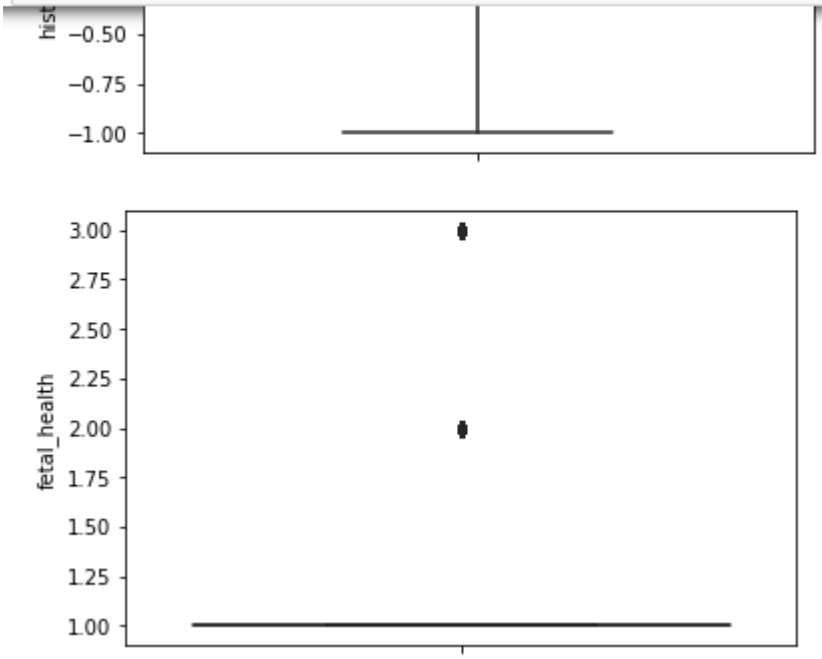
```
from sklearn.neighbors import KNeighborsClassifier
classifier=KNeighborsClassifier(n_neighbors=5,metric='minkowski',p=2)
classifier.fit(X_train,y_train)
KNeighborsClassifier()
y_pred=classifier.predict(X_test)
print(np.concatenate((y_pred.reshape(len(y_pred),1),y_test.reshape(len
(y_test),1)),1))
```

```
[[1. 1.]
 [3. 3.]
 [1. 1.]
 ...
 [1. 1.]
 [1. 1.]
 [2. 1.]]
```

```
from sklearn.preprocessing import StandardScaler
SC=StandardScaler()
X_train=SC.fit_transform(X_train)
X_test=SC.fit_transform(X_test)
print(X_train)
```

```
[[-1.46513509 -0.83485626 -0.20820521 ... -1.18281773 -0.60623421
  -2.14821249]
 [ 0.16393359 -0.83485626 -0.0746156  ... -0.08025974 -0.53911612
   1.13129086]
 [-1.2615015   2.2251405  -0.00782079 ... -0.42480911 -0.37132092
  -2.14821249]
 ...
 [ 1.28391831  1.71514104 -0.20820521 ...  1.160118   -0.50555708
  -0.50846081]
 [ 1.08028472 -0.83485626  0.6823922  ...  0.74665876 -0.06928955
   1.13129086]
 [ 0.97846793 -0.3248568   0.94957142 ...  0.74665876  1.00459976
  -0.50846081]]
```

```
for i in range(0, len(nums )):
 sns.boxplot(y=df[nums[i]],color='green',orient='v')
 plt.show()
```



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2	129.0	0.005	0.003	0.001	0.000	0.0	0.0	
3	136.0	0.006	0.000	0.008	0.000	0.0	0.0	
4	144.0	0.000	0.000	0.006	0.000	0.0	0.0	

5 rows × 22 columns