LM THAPAR SCHOOL OF MANAGEMENT

PYTHON AND MLDM PROJECT ON FINANACIAL SECTOR AND SERVICES IN MUTUAL FUNDS Submitted By : Submitted To:

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IMPORT LIBRARIES AND READ THE FILE

In [14]:

1 import pandas as pd
2 import matplotlib.pyplot as plt
3 import numpy as np
4 import seaborn as sns
5 sns.set(color_codes=True)

In [70]: ▶

- 1 data=pd.read_csv("Mutualfund.csv")
- 2 data

Out[70]:

	Scheme Name	Plan	Category Name	Crisil Rank	YTD	2022	2021	2020	2019	2018	2017	2016	201
0	SBI Contra Fund - Direct Plan - Growth Contra	Direct Plan	Contra Fund	5	-0.01	0.14	0.49	0.31	0.00	-0.14	0.41	0.02	0.0
1	SBI Contra Fund - Regular Plan - Growth Contra	Regular	Contra Fund	5	-0.01	0.13	0.48	0.30	-0.01	-0.14	0.40	0.02	-0.0
2	Bandhan Tax Advantage (ELSS) Fund - Direct Pla	Direct Plan	ELSS	5	-0.03	0.05	0.48	0.20	0.04	-0.08	0.55	0.01	0.0
4	- · · -												

In [71]:

▶

```
1 data.head()
```

Out[71]:

	Scheme Name	Plan	Category Name	Crisil Rank	YTD	2022	2021	2020	2019	2018	2017	2016	21
0	SBI Contra Fund - Direct Plan - Growth Contra	Direct Plan	Contra Fund	5	-0.01	0.14	0.49	0.31	0.00	-0.14	0.41	0.02	С
1	SBI Contra Fund - Regular Plan - Growth Contra	Regular	Contra Fund	5	-0.01	0.13	0.48	0.30	-0.01	-0.14	0.40	0.02	-0
2	Bandhan Tax Advantage (ELSS) Fund - Direct Pla	Direct Plan	ELSS	5	-0.03	0.05	0.48	0.20	0.04	-0.08	0.55	0.01	С
3	Bandhan Tax Advantage (ELSS) Fund - Regular Pl	Regular	ELSS	5	-0.03	0.04	0.47	0.19	0.02	-0.09	0.53	0.00	С
4	HDFC Tax Saver Fund - Direct Plan - Growth ELSS	Direct Plan	ELSS	5	-0.02	0.11	0.34	0.06	0.04	-0.10	0.40	0.07	-0

In [72]: ▶

```
1 d1=data.columns
2 d1
```

Out[72]:

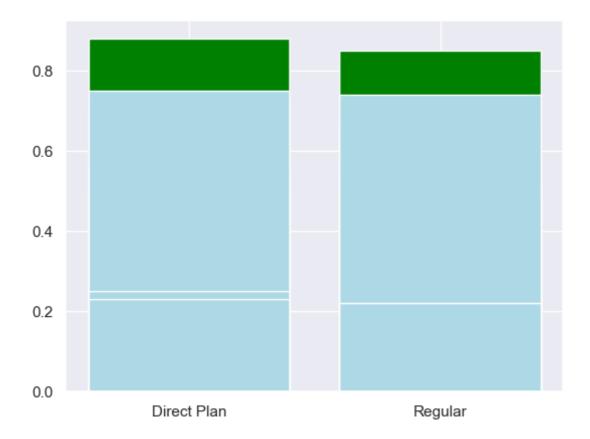
BAR PLOT

```
In [85]:

1
2 plt.bar(data['Plan'],data['2021'],color="green")
3 plt.bar(data['Plan'],data['2020'],color="lightblue")
4
```

Out[85]:

<BarContainer object of 48 artists>



In [79]: ▶

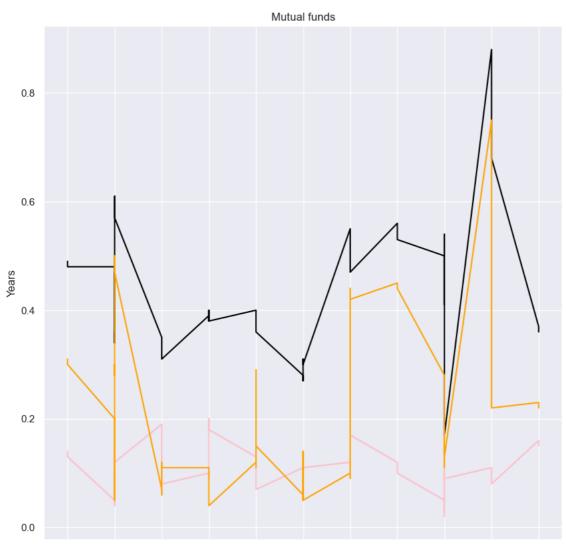
```
# X=data["Plan"]
Y=data['2022']
plt.bar(X,Y,color="red",width=0.2)
plt.xlabel("X")
plt.ylabel("Y")
plt.title("Scheme Name vs Years")
plt.show()
```



LINE PLOT

In [86]:

```
1
 2
   X_values=data["Category Name"]
 3
 4 Y_values=data['2022']
 5 Y1_values=data['2021']
 6 Y2_values=data['2020']
   plt.figure(figsize=(10,10))
 7
   plt.plot(X_values,Y_values,color='pink')
 9
   plt.plot(X_values,Y1_values,color='black')
   plt.plot(X_values,Y2_values,color='orange')
10
11
12
   plt.xlabel('Category')
13
14
   plt.ylabel('Years')
15
   plt.title("Mutual funds")
16
17
   plt.show()
18
```

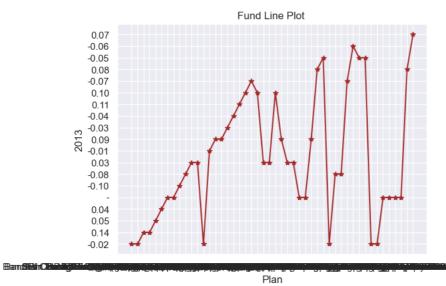


Contra Fund ELSSFlexi Cap From clusted regen fold Mid Class general Middle Fund Middle Fund Category

In [228]: ▶

```
1
2  X_values=data["Scheme Name"]
3  Y_values=data['2013']
4
5  plt.plot(X_values, Y_values,color='brown',marker='*')
6
7  plt.xlabel('Plan')
8  plt.ylabel('2013')
9  plt.title("Fund Line Plot ")
10  plt.show()
```

Light Eund



PIE PLOT

```
In [91]:
                                                                                                                                                                                                                                                                                                                                                           H
                x=data["Crisil Rank"]
                y=data['2022']
                plt.pie(x,labels=y,autopct="'%.1f'")
                plt.title("PIE PLOT ")
      5
                 plt.axis('equal')
       6
Out[91]:
(-1.1000000023492162,
   1.1000000043920042,
    -1.1000000032684716,
    1.1000000012256792)
                                                                     PIE PLOT
0.09 0.180.190.12
0.2 0.05
0.07
                                                        0.18
                                               0.13
                                       0.12
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                                0.15
                                                                                                                                                                                                                              0.04
                            0.07
                                                                                                                                                                                                                                   0.05
                         0.11
                                                                                                                                                                                                                                       0.13
                        0 11
                                                                                                                                                                                                                                        0 1 4
In [95]:
                x=data['2022']
                y=data['Scheme Name']
                plt.pie(x,labels=y,autopct="'%.1f'")
                plt.title("PIE PLOT ")
                plt.axis('equal')
Out[95]:
(-1.1001223162896165,
    1.1000058245852198,
    -1.1002446225672147,
    1.1006861390113618)
                                                  HDFC Focused 30 Fund - Direct Plan - Growth Focused Fund
                                                       HDFC Focused 30 Fund - Growth Focused Fund
  ICICI Prudential Large & Mid Cap Fund- Direct Plan - Growth Large & Mid Cap Fund
                                                                                                                                                                                            HDFC Tax Saver Fund - Growth ELSS

HDFC Tax Saver Fund - Direct Plan - Growth ELSS

Bandhan Tax Advantage (ELSS) Fund - Regular Plan - Growth ELSS

Bandhan Tax Advantage (ELSS) Fund - Direct Plan - Growth ELSS
                 ICICI Prudential Large & Mid Cap Fund- Growth Large & Mid Cap Fund
       Quant Large and Mid Cap Fund - Direct Plan - Growth Large & Mid Cap Fund
           SBI Large & Midcap Fund - Regular Plan - Growth Large & Mid Cap Fund
HDFC Top 100 Fund - Direct Plan - Growth Large Cap Fund
                                                                                                                                                                                                 SBI Contra Fund - Direct Plan - Growth Contra Fund
                                                                                                                                                                                                 ICICI Prudential Value Discovery Fund - Growth Value Fund
                                                HDFC Top 100 Fund - Growth Large Cap Fund
                ICICI Prudential Bluechip Fund - Direct Plan - Growth Large Cap Fund ICICI Prudential Bluechip Fund - Growth Large Cap Fund Nippon India Large Cap Fund - Direct Plan - Growth Large Cap Fund
                                                                                                                                                                                                ICICI Prudential Value Discovery Fund - Direct Plan - Growth Value Fund
                                  ICICI Prudential Bluechip Fund - Growth Large Cap Fund
India Large Cap Fund - Direct Plan - Growth Large Cap Fund
Nippon India Large Cap Fund - Growth Large Cap Fund
Motial Oswal Midcap Fund - Direct Plan - Growth Mid Cap Fund
Motial Oswal Midcap Fund - Direct Plan - Growth Mid Cap Fund
Quant Small Cap Fund - Direct Plan - Growth Small Cap Fund
Quant Mid Cap Fund - Growth Small Cap Fund
Quant Small Cap Fund - Direct Plan - Growth Small Cap Fund
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Quant Mid Cap Fund - Orionth Small Cap Fund
Quant Mid Cap Fund - Orionth Small Cap Fund
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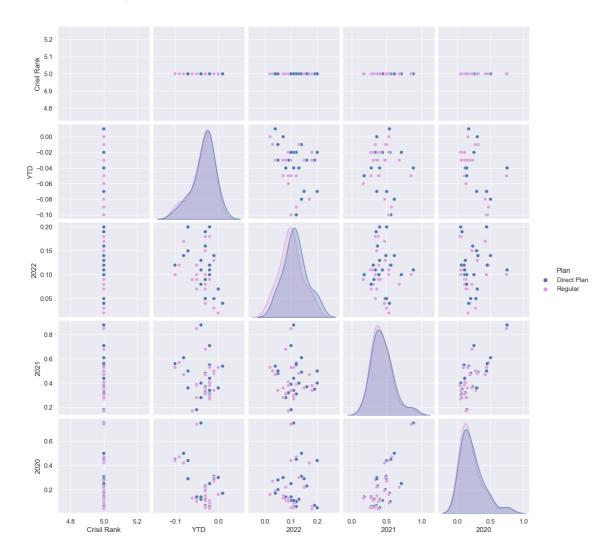
PAIR PLOT

```
In [223]: 
▶
```

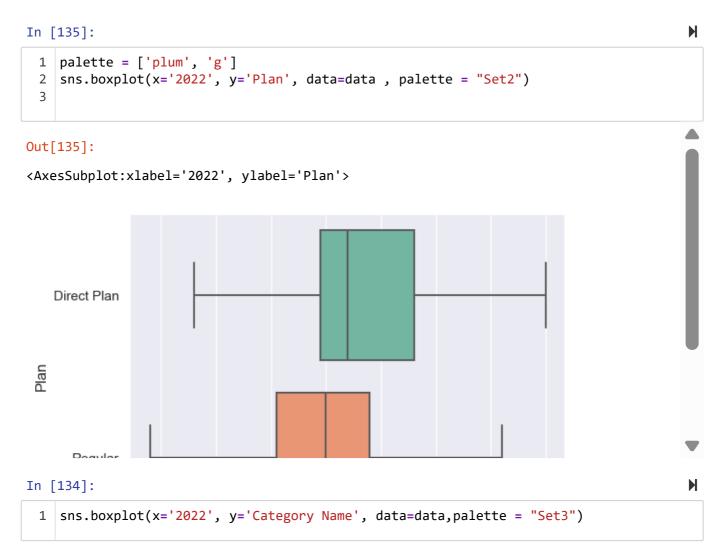
```
sns.pairplot(data,hue='Plan',palette=['b', 'plum'])
```

Out[223]:

<seaborn.axisgrid.PairGrid at 0x23994f785b0>

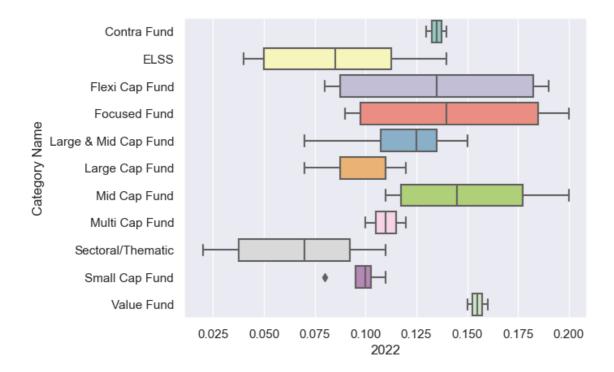


BOXPLOT



Out[134]:

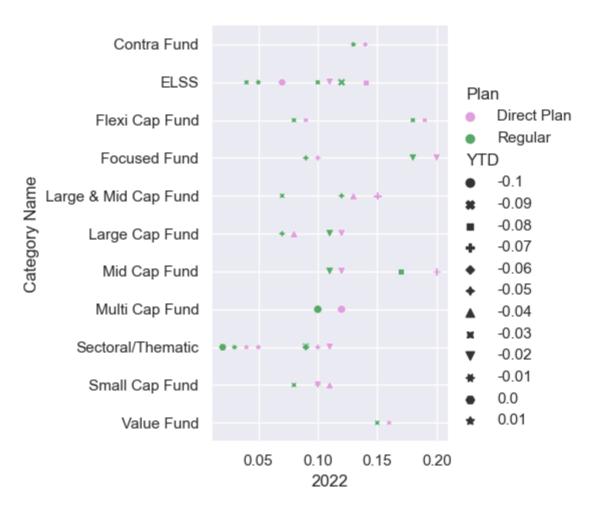
<AxesSubplot:xlabel='2022', ylabel='Category Name'>



RELATIONAL PLOT

In [192]: ▶

```
g=sns.relplot(x='2022', y='Category Name', data=data ,hue="Plan", style="YTD",
palette=['plum','g'])
```



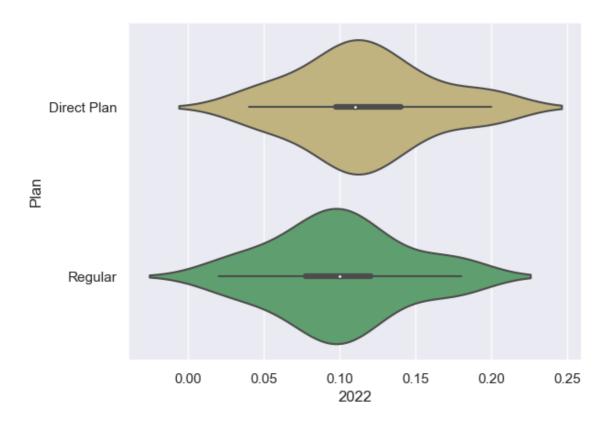
VIOLIN PLOT

```
In [200]: ▶
```

```
sns.violinplot(x='2022', y='Plan', data=data,palette=['y','g'])
```

Out[200]:

<AxesSubplot:xlabel='2022', ylabel='Plan'>

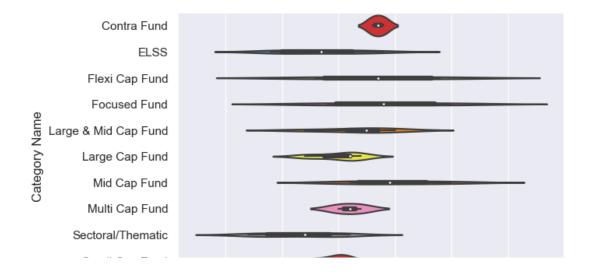


In [213]:

1 | sns.violinplot(x='2022', y='Category Name', data=data, palette="Set1")

Out[213]:

<AxesSubplot:xlabel='2022', ylabel='Category Name'>



SWARMPLOT

In [220]: ▶

sns.swarmplot(x='2022', y='Category Name', data=data , palette="Set2")

Out[220]:

<AxesSubplot:xlabel='2022', ylabel='Category Name'>

