

PYTHON AND MLDM PROJECT ON FINANACIAL SECTOR AND SERVICES IN MUTUAL FUNDS

Submitted By : Submitted To:

Sanya Gupta (502204196) Mr. Sandeep Goyal Nikita Marwaha (502204095) Mr. Nitin Arvind Shelke

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	2015
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	0.00
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	-0.00
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	0.00

In [71]:

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

Out[71]:

	Scheme Name	Plan	Category Name	Crisil Rank	YTD	2022	2021	2020	2019	2018	2017	2016	2015
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
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	0
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	0
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]:

```
Index(['Scheme Name', 'Plan', 'Category Name', 'Crisil Rank', 'YTD', '2022',
      '2021', '2020', '2019', '2018', '2017', '2016', '2015', '2014', '2013',
      '2012'],
      dtype='object')
```

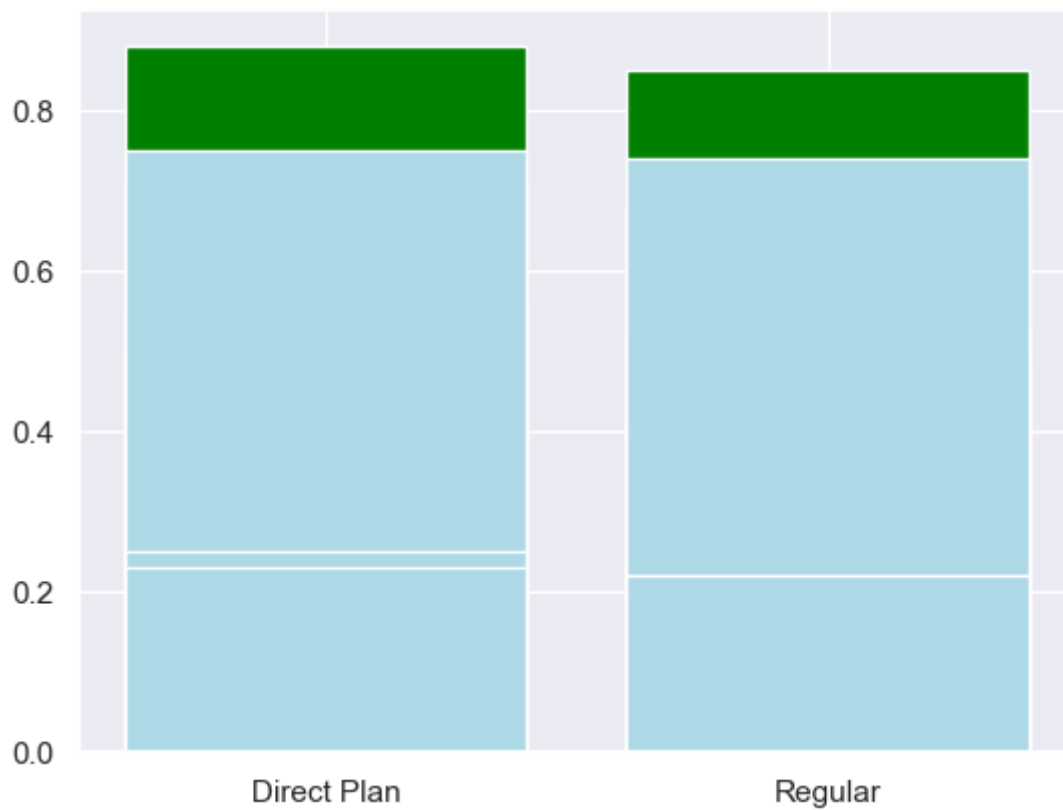
BAR PLOT

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]:

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

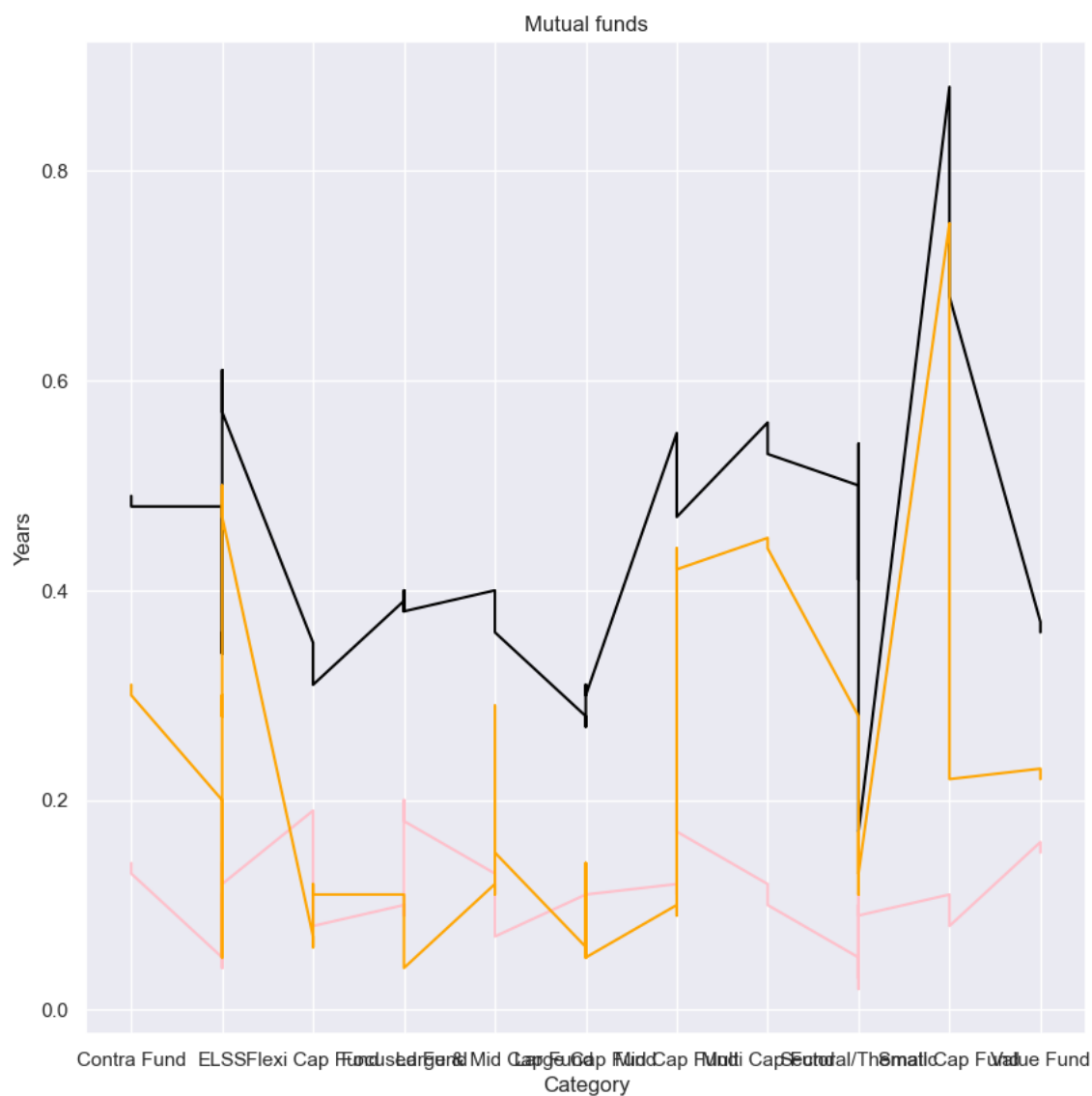


LINE PLOT

In [86]:



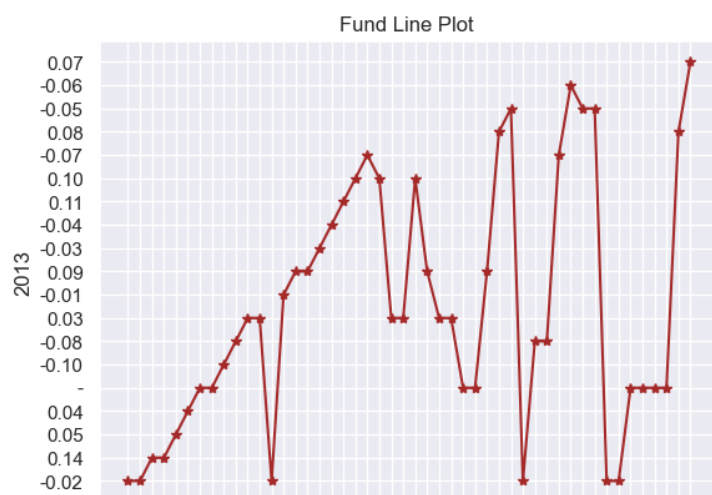
```
1
2 X_values=data["Category Name"]
3
4 Y_values=data['2022']
5 Y1_values=data['2021']
6 Y2_values=data['2020']
7 plt.figure(figsize=(10,10))
8 plt.plot(X_values,Y_values,color='pink')
9 plt.plot(X_values,Y1_values,color='black')
10 plt.plot(X_values,Y2_values,color='orange')
11
12
13 plt.xlabel('Category')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



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()
```



Brand Finance
Plan

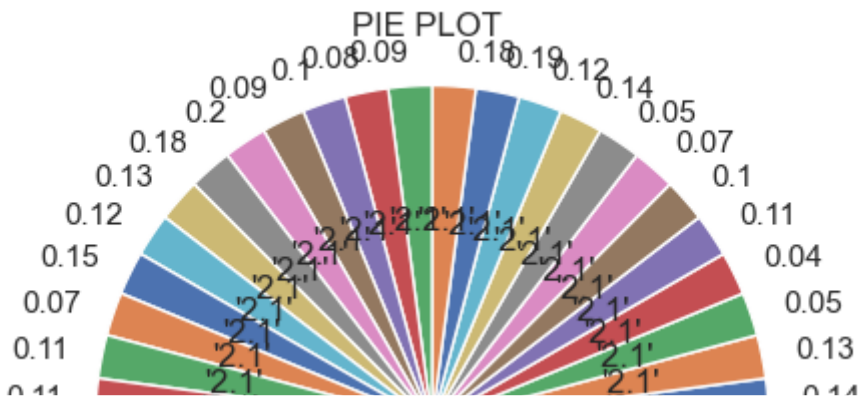
PIE PLOT

In [91]:

```
1 x=data["Crisil Rank"]
2 y=data['2022']
3 plt.pie(x,labels=y,autopct="%.1f'")
4 plt.title("PIE PLOT ")
5 plt.axis('equal')
6
```

Out[91]:

(-1.1000000023492162,
1.1000000043920042,
-1.1000000032684716,
1.1000000012256792)

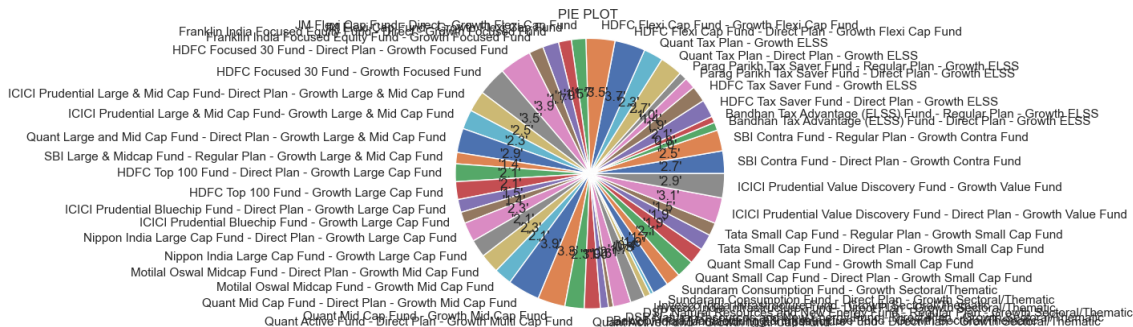


In [95]:

```
1 x=data['2022']
2 y=data['Scheme Name']
3 plt.pie(x,labels=y,autopct="%.1f'")
4 plt.title("PIE PLOT ")
5 plt.axis('equal')
```

Out[95]:

(-1.1001223162896165,
1.1000058245852198,
-1.1002446225672147,
1.1006861390113618)



PAIR PLOT

In [223]:

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

Out[223]:

<seaborn.axisgrid.PairGrid at 0x23994f785b0>



BOXPLOT

In [135]:

```
1 palette = ['plum', 'g']  
2 sns.boxplot(x='2022', y='Plan', data=data , palette = "Set2")  
3
```

Out[135]:

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

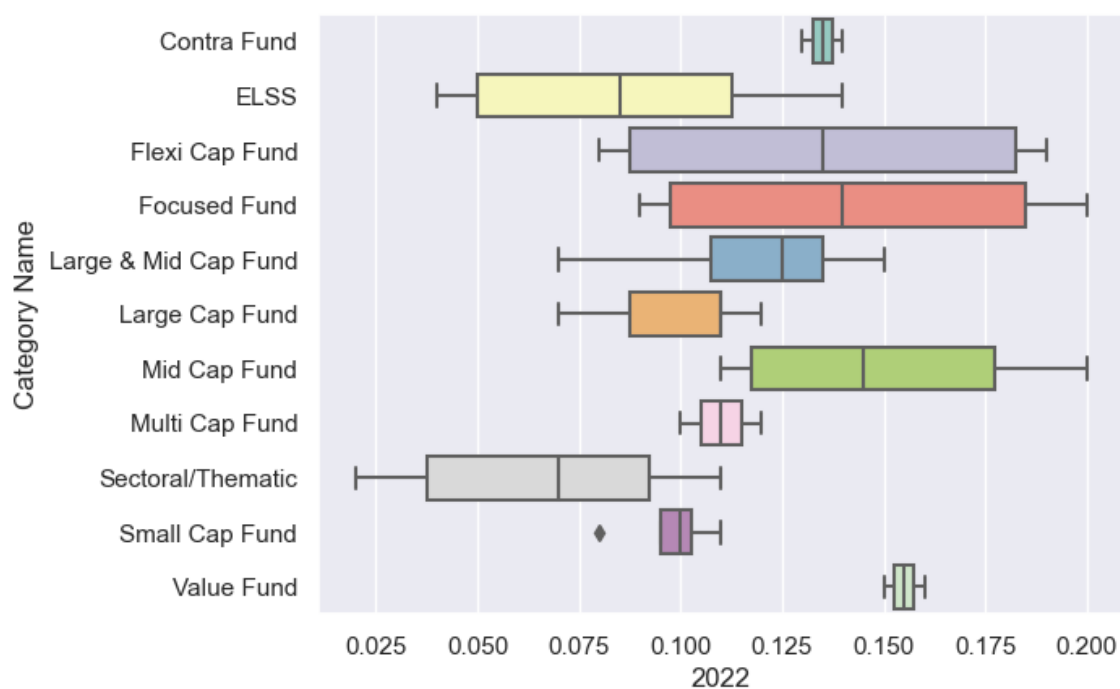


In [134]:

```
1 sns.boxplot(x='2022', y='Category Name', data=data,palette = "Set3")
```

Out[134]:

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



RELATIONAL PLOT

In [192]:

```
1  
2 g=sns.relplot(x='2022', y='Category Name', data=data ,hue="Plan", style="YTD",  
3 palette=['plum','g'])
```



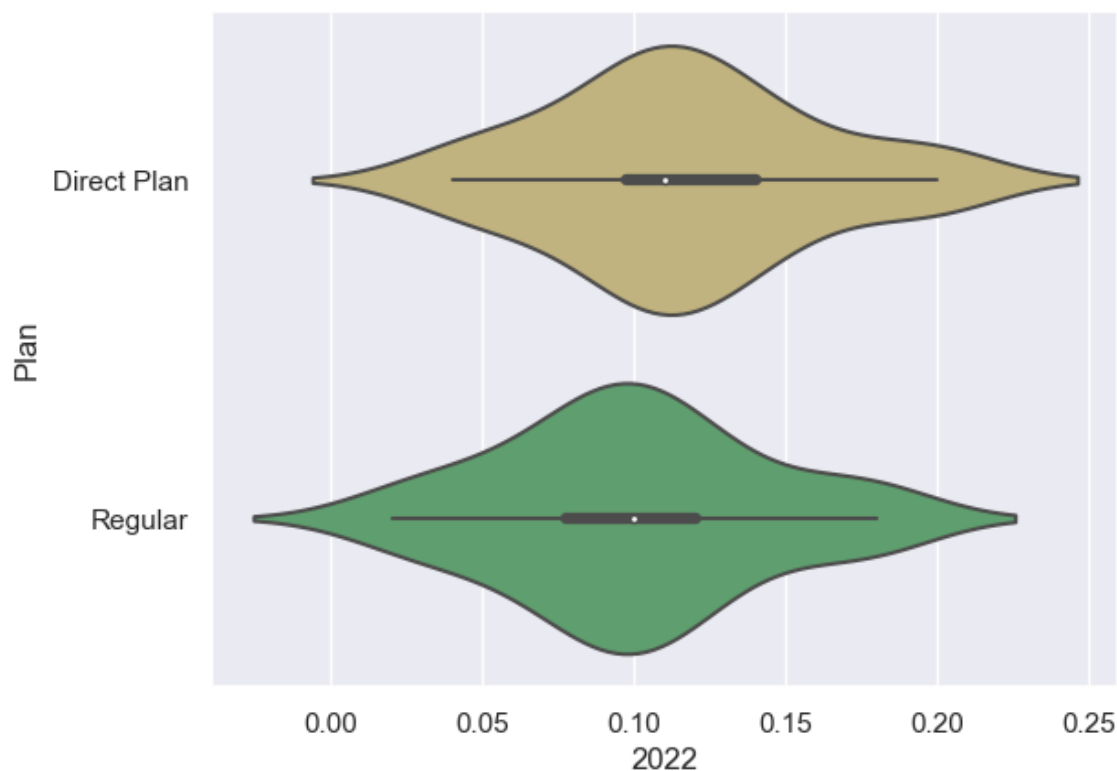
VIOLIN PLOT

In [200]:

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

Out[200]:

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

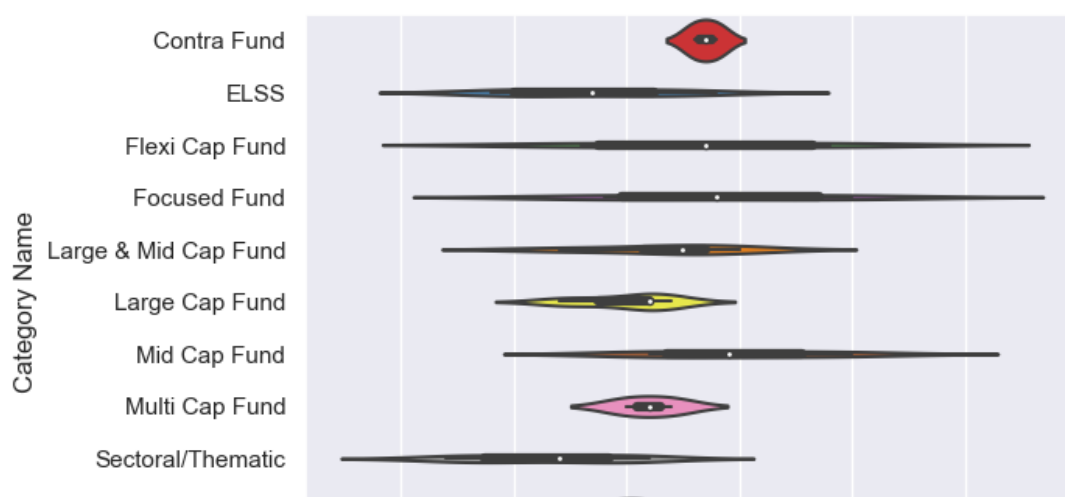


In [213]:

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

Out[213]:

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



SWARMPLOT

In [220]:



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

Out[220]:

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

