

```
In [37]: import pandas as pd
```

```
In [38]: df=pd.read_csv("data hackathon.csv")  
df
```

Out[38]:

	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
0	Tax Revenue	NaN	NaN	NaN	NaN
1	Gross Tax Revenue	2010059.33	2423020	1900279.83	2217059.27
2	Corporation Tax	556875.55	681000	446000	547000
3	Taxes on Income	492653.71	638000	459000	561000
4	Wealth Tax	19.81
5	Customs	109282.54	138000	112000	136000
6	Union Excise Duties	240614.52	267000	361000	335000
7	Service Tax	6029.11	1020	1400	1000
8	Goods and Services Tax (GST)#	598748.90	690500	515100	630000
9	Taxes of Union Territories	5835.19	7500	5779.83	7059.27
10	Less - NCCD transferred to the National Calami...	2480.00	2930	5820	6100
11	Less - States' share	650677.05	784180.87	549959.19	665562.74
12	Centre's Net Tax Revenue	1356902.28	1635909.13	1344500.64	1545396.53
13	Non-Tax Revenue	NaN	NaN	NaN	NaN
14	Interest receipts	12348.98	11042.04	14004.66	11541.17
15	Dividends and Profits	186132.54	155395.47	96543.54	103538.42
16	Other Non Tax Revenue	126913.44	216277.23	98023.7	125417.67
17	Receipts of Union Territories	1761.81	2302.56	2080.63	2530.64
18	Total Non Tax Revenue	327156.77	385017.3	210652.53	243027.9
19	Total Revenue Receipts	1684059.05	2020926.43	1555153.17	1788424.43
20	Capital Receipts	NaN	NaN	NaN	NaN
21	Non-debt Receipts	NaN	NaN	NaN	NaN
22	Recoveries of loans and advances	18316.15	14966.67	14497	13000
23	Miscellaneous Capital Receipts	50304.33	210000	32000	175000
24	Total	68620.48	224966.67	46497	188000
25	Debt Receipts	NaN	NaN	NaN	NaN
26	Market Loans (Net)	4739.33	540869	1900351	1900351
27	Market Loans for Repayments (including POLIF)	236032.12	239130.38	231211.82	287792.28
28	Market Loans for Buyback	0.00	30000	0	0
29	Market Loans for Switching	164821.53	270000	160000	180000
30	Less Payments for Switching	-164803.30	-270000	-160000	-180000
31	Market Loans (Gross) (1+2)	710000.00	780000	128000	1205500
32	Short Term/T-Bill Borrowings	150103.04	25000	225000	50000
33	External Loan (Net)	8682.32	4621.65	54522.23	1514.23
34	Securities issued against Small Savings (Net)	240000.00	240000	480573.89	391927.01

	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
35	State Provident Fund (Net)	11635.33	18000	18000	20000
36	Other Receipts (Net)^	44273.85	50848.54	39128.84	54280.18
37	Total Debt Receipts	933651.00	796337	1848655	1506812
38	Net Capital Receipts	997300.53	1074306.48	1912510.24	1623428.35
39	Draw-Down of Cash Balance	4970.35	-53002.81	-17358.14	71382.86
40	Total Receipts (I+II)	2681359.58	3095232.91	3467663.41	3411852.78

```
In [39]: df_cleaned = df.dropna()
print(df_cleaned)
```

	Revenue Receipts	2018-19	2019-20 \
1	Gross Tax Revenue	2010059.33	2423020
2	Corporation Tax	556875.55	681000
3	Taxes on Income	492653.71	638000
4	Wealth Tax	19.81	...
5	Customs	109282.54	138000
6	Union Excise Duties	240614.52	267000
7	Service Tax	6029.11	1020
8	Goods and Services Tax (GST)#	598748.90	690500
9	Taxes of Union Territories	5835.19	7500
10	Less - NCCD transferred to the National Calami...	2480.00	2930
11	Less - States' share	650677.05	784180.87
12	Centre's Net Tax Revenue	1356902.28	1635909.13
14	Interest receipts	12348.98	11042.04
15	Dividends and Profits	186132.54	155395.47
16	Other Non Tax Revenue	126913.44	216277.23
17	Receipts of Union Territories	1761.81	2302.56
18	Total Non Tax Revenue	327156.77	385017.3
19	Total Revenue Receipts	1684059.05	2020926.43
22	Recoveries of loans and advances	18316.15	14966.67
23	Miscellaneous Capital Receipts	50304.33	210000
24	Total	68620.48	224966.67
26	Market Loans (Net)	4739.33	540869
27	Market Loans for Repayments (including POLIF)	236032.12	239130.38
28	Market Loans for Buyback	0.00	30000
29	Market Loans for Switching	164821.53	270000
30	Less Payments for Switching	-164803.30	-270000
31	Market Loans (Gross) (1+2)	710000.00	780000
32	Short Term/T-Bill Borrowings	150103.04	25000
33	External Loan (Net)	8682.32	4621.65
34	Securities issued against Small Savings (Net)	240000.00	240000
35	State Provident Fund (Net)	11635.33	18000
36	Other Receipts (Net)^	44273.85	50848.54
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38	Net Capital Receipts	997300.53	1074306.48
39	Draw-Down of Cash Balance	4970.35	-53002.81
40	Total Receipts (I+II)	2681359.58	3095232.91

	2020-21	2021-22
1	1900279.83	2217059.27
2	446000	547000
3	459000	561000
4
5	112000	136000
6	361000	335000
7	1400	1000
8	515100	630000
9	5779.83	7059.27
10	5820	6100
11	549959.19	665562.74
12	1344500.64	1545396.53
14	14004.66	11541.17
15	96543.54	103538.42
16	98023.7	125417.67
17	2080.63	2530.64
18	210652.53	243027.9
19	1555153.17	1788424.43
22	14497	13000
23	32000	175000
24	46497	188000
26	1900351	1900351
27	231211.82	287792.28
28	0	0
29	160000	180000

30	-160000	-180000
31	128000	1205500
32	225000	50000
33	54522.23	1514.23
34	480573.89	391927.01
35	18000	20000
36	39128.84	54280.18
37	1848655	1506812
38	1912510.24	1623428.35
39	-17358.14	71382.86
40	3467663.41	3411852.78

In [40]: df

Out[40]:

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	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
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37	Total Debt Receipts	933651.00	796337	1848655	1506812
38	Net Capital Receipts	997300.53	1074306.48	1912510.24	1623428.35
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40	Total Receipts (I+II)	2681359.58	3095232.91	3467663.41	3411852.78

In [41]:

df

Out[41]:

	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
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2	Corporation Tax	556875.55	681000	446000	547000
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23	Miscellaneous Capital Receipts	50304.33	210000	32000	175000
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25	Debt Receipts	NaN	NaN	NaN	NaN
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40	Total Receipts (I+II)	2681359.58	3095232.91	3467663.41	3411852.78

```
In [42]: import pandas as pd
df=pd.read_csv("data hackathon.csv")
df.dropna(inplace=True)
print(df)
```

	Revenue Receipts	2018-19	2019-20 \
1	Gross Tax Revenue	2010059.33	2423020
2	Corporation Tax	556875.55	681000
3	Taxes on Income	492653.71	638000
4	Wealth Tax	19.81	...
5	Customs	109282.54	138000
6	Union Excise Duties	240614.52	267000
7	Service Tax	6029.11	1020
8	Goods and Services Tax (GST)#	598748.90	690500
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23	Miscellaneous Capital Receipts	50304.33	210000
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28	Market Loans for Buyback	0.00	30000
29	Market Loans for Switching	164821.53	270000
30	Less Payments for Switching	-164803.30	-270000
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33	External Loan (Net)	8682.32	4621.65
34	Securities issued against Small Savings (Net)	240000.00	240000
35	State Provident Fund (Net)	11635.33	18000
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37	Total Debt Receipts	933651.00	796337
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	2020-21	2021-22
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4
5	112000	136000
6	361000	335000
7	1400	1000
8	515100	630000
9	5779.83	7059.27
10	5820	6100
11	549959.19	665562.74
12	1344500.64	1545396.53
14	14004.66	11541.17
15	96543.54	103538.42
16	98023.7	125417.67
17	2080.63	2530.64
18	210652.53	243027.9
19	1555153.17	1788424.43
22	14497	13000
23	32000	175000
24	46497	188000
26	1900351	1900351
27	231211.82	287792.28
28	0	0
29	160000	180000

30	-160000	-180000
31	128000	1205500
32	225000	50000
33	54522.23	1514.23
34	480573.89	391927.01
35	18000	20000
36	39128.84	54280.18
37	1848655	1506812
38	1912510.24	1623428.35
39	-17358.14	71382.86
40	3467663.41	3411852.78

In [44]: df

Out[44]:

	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
1	Gross Tax Revenue	2010059.33	2423020	1900279.83	2217059.27
2	Corporation Tax	556875.55	681000	446000	547000
3	Taxes on Income	492653.71	638000	459000	561000
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28	Market Loans for Buyback	0.00	30000	0	0
29	Market Loans for Switching	164821.53	270000	160000	180000
30	Less Payments for Switching	-164803.30	-270000	-160000	-180000
31	Market Loans (Gross) (1+2)	710000.00	780000	128000	1205500
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	Revenue Receipts	2018-19	2019-20	2020-21	2021-22
40	Total Receipts (I+II)	2681359.58	3095232.91	3467663.41	3411852.78

```
In [47]: df_long = pd.melt(df, id_vars=['Revenue Receipts'], var_name='Year', value_name='Amount')
# Display the long format data
df_long
```

```
Out[47]:
```

	Revenue Receipts	Year	Amount
0	Gross Tax Revenue	2018-19	2010059.33
1	Corporation Tax	2018-19	556875.55
2	Taxes on Income	2018-19	492653.71
3	Wealth Tax	2018-19	19.81
4	Customs	2018-19	109282.54
...
139	Other Receipts (Net)^	2021-22	54280.18
140	Total Debt Receipts	2021-22	1506812
141	Net Capital Receipts	2021-22	1623428.35
142	Draw-Down of Cash Balance	2021-22	71382.86
143	Total Receipts (I+II)	2021-22	3411852.78

144 rows × 3 columns

```
In [ ]:
```

```
In [48]: df_long
```

```
Out[48]:
```

	Revenue Receipts	Year	Amount
0	Gross Tax Revenue	2018-19	2010059.33
1	Corporation Tax	2018-19	556875.55
2	Taxes on Income	2018-19	492653.71
3	Wealth Tax	2018-19	19.81
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139	Other Receipts (Net)^	2021-22	54280.18
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144 rows × 3 columns

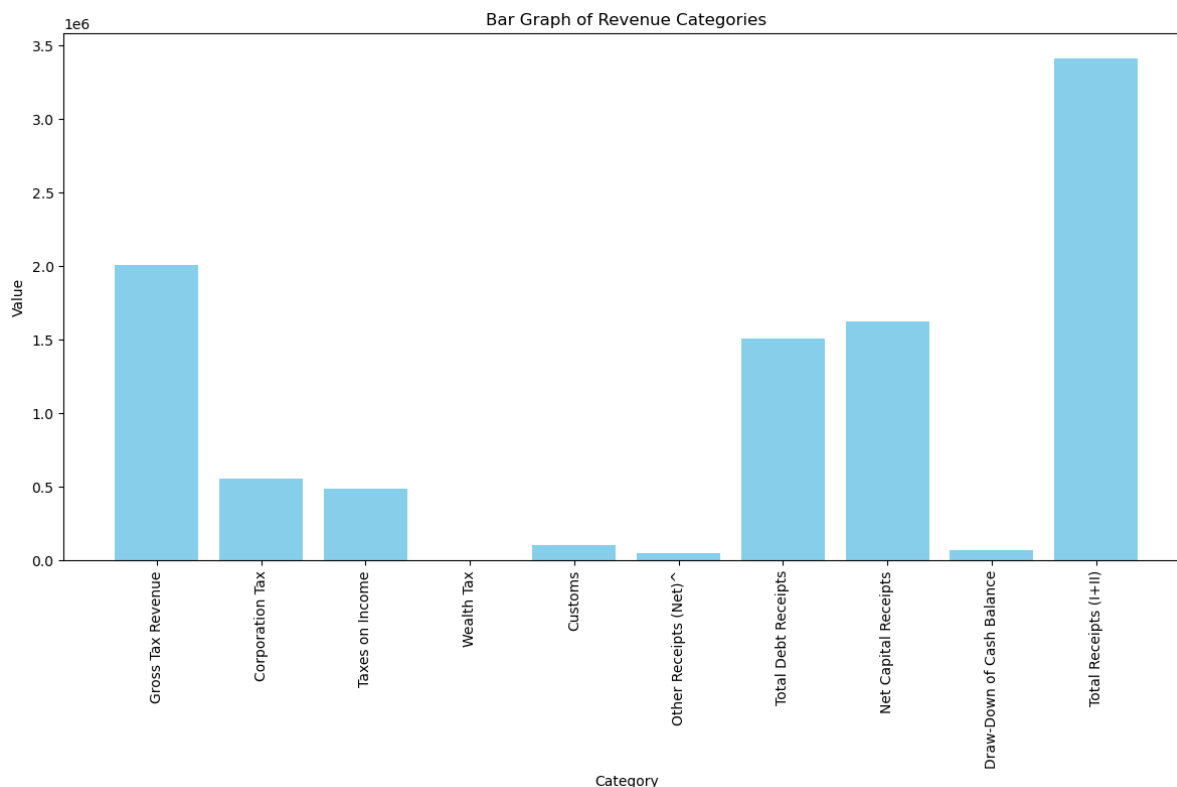
```
In [30]: categories = data['Category']
years = data['Year']
values = data['Value']

plt.figure(figsize=(12, 8))
plt.bar(categories, values, color='skyblue')

plt.xticks(rotation=90)

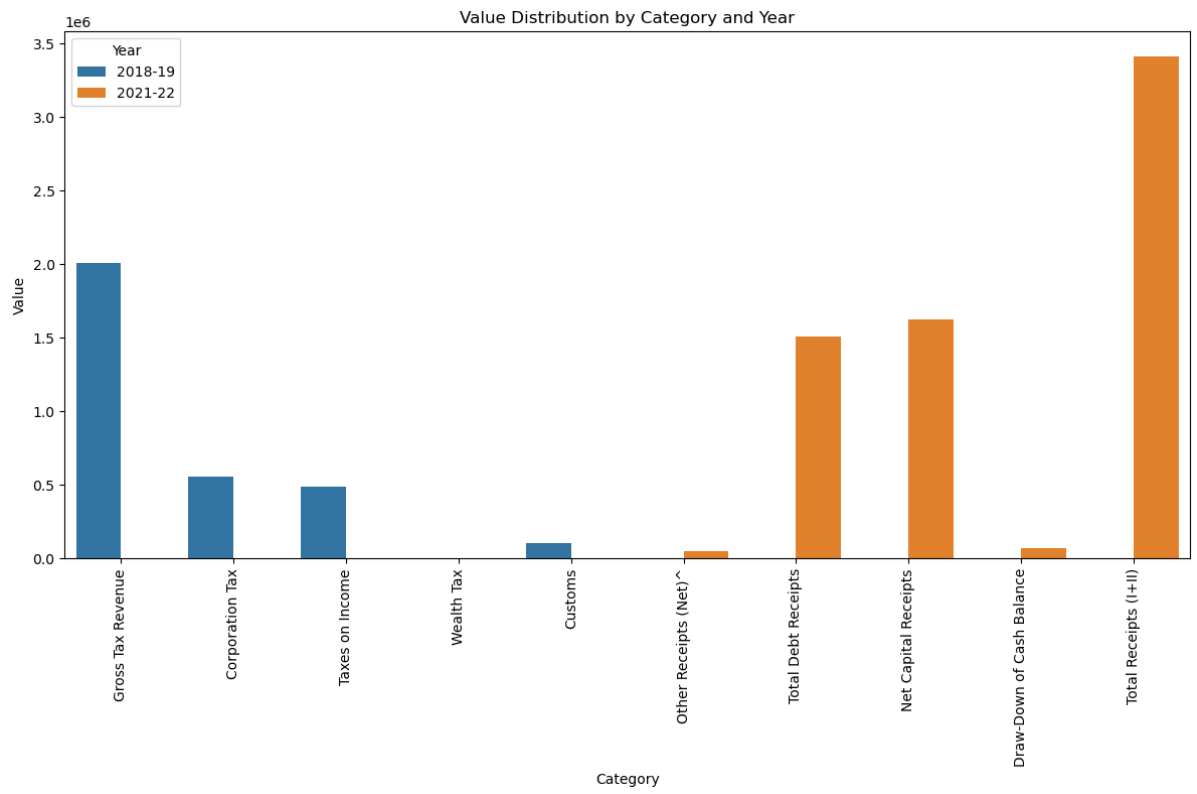
plt.xlabel('Category')
plt.ylabel('Value')
plt.title('Bar Graph of Revenue Categories')

plt.tight_layout()
plt.show()
```



```
In [31]: import seaborn as sns
df = pd.DataFrame(data)

plt.figure(figsize=(12, 8))
sns.barplot(x='Category', y='Value', hue='Year', data=df)
plt.xticks(rotation=90)
plt.title('Value Distribution by Category and Year')
plt.xlabel('Category')
plt.ylabel('Value')
plt.tight_layout()
plt.show()
```



In []:

In []:

In []: