

```
In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [3]: a=pd.read_csv(r"C:\All Datasets\unemployment analysis.csv")
a
```

Out[3]:

1991	1992	1993	1994	1995	1996	1997	1998	...	2012	2013	2014	2015	2016	2017	2018
7.80	7.84	7.85	7.84	7.83	7.84	7.86	7.81	...	6.56	6.45	6.41	6.49	6.61	6.71	6.76
10.65	10.82	10.72	10.73	11.18	10.96	10.78	10.80	...	11.34	11.19	11.14	11.13	11.16	11.18	11.21
4.42	4.53	4.55	4.54	4.53	4.57	4.60	4.66	...	4.64	4.41	4.69	4.63	5.57	6.02	6.07
4.21	4.21	4.23	4.16	4.11	4.10	4.09	4.07	...	7.35	7.37	7.37	7.39	7.41	7.41	7.43
30.31	30.01	25.26	20.84	14.61	13.93	16.88	20.05	...	13.38	15.87	18.05	17.19	15.42	13.62	12.57
...
2.10	2.38	2.63	3.04	3.19	3.47	3.90	4.18	...	8.75	8.67	8.72	8.50	8.31	8.58	8.63
8.32	8.31	8.35	8.34	8.96	9.59	10.20	10.81	...	13.17	13.27	13.47	13.77	13.43	13.30	13.33
29.95	29.98	29.92	29.89	29.89	29.87	29.91	29.95	...	24.73	24.56	24.89	25.15	26.54	27.04	27.09
19.90	19.37	19.70	18.43	16.81	15.30	13.64	12.00	...	7.85	8.61	9.36	10.13	10.87	11.63	12.38
4.94	4.99	4.97	4.96	5.63	6.25	6.93	6.46	...	5.15	4.98	4.77	4.78	4.79	4.78	4.79

```
In [ ]:
```

```
In [4]: a.isnull().sum()
```

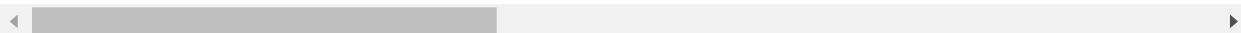
```
Out[4]: Country Name      0
Country Code      0
1991              0
1992              0
1993              0
1994              0
1995              0
1996              0
1997              0
1998              0
1999              0
2000              0
2001              0
2002              0
2003              0
2004              0
2005              0
2006              0
2007              0
2008              0
2009              0
2010              0
2011              0
2012              0
2013              0
2014              0
2015              0
2016              0
2017              0
2018              0
2019              0
2020              0
2021              0
dtype: int64
```

In [5]: `a.describe()`

Out[5]:

	1991	1992	1993	1994	1995	1996	1997	
count	235.000000	235.000000	235.000000	235.000000	235.000000	235.000000	235.000000	235.00
mean	7.278000	7.626340	8.070766	8.246043	8.333915	8.494894	8.394043	8.44
std	6.013749	6.296617	6.335855	6.243778	6.330822	6.358431	6.206845	6.13
min	0.300000	0.340000	0.410000	0.470000	0.500000	0.560000	0.540000	0.56
25%	2.945000	3.140000	3.700000	3.890000	3.945000	3.995000	4.020000	4.08
50%	5.410000	5.710000	6.030000	6.550000	6.700000	7.050000	6.930000	6.89
75%	9.815000	10.170000	10.895000	11.110000	11.050000	11.405000	11.090000	11.50
max	36.120000	36.390000	36.740000	36.980000	37.340000	38.800000	37.940000	37.16

8 rows × 31 columns



In [7]: `np.where(a["Country Code"]=="AFE")`

Out[7]: `(array([0], dtype=int64),)`

In [8]: `np.where(a=="AFE")`

Out[8]: `(array([0], dtype=int64), array([1], dtype=int64))`

```
In [9]: a1=a.loc[(a["1991"]>8)]
a1
```

Out[9]:

	1991	1992	1993	1994	1995	1996	1997	1998	...	2012	2013	2014	2015	2016	2017
	.65	10.82	10.72	10.73	11.18	10.96	10.78	10.80	...	11.34	11.19	11.14	11.13	11.16	11.18
	.31	30.01	25.26	20.84	14.61	13.93	16.88	20.05	...	13.38	15.87	18.05	17.19	15.42	13.62
	.62	12.12	12.86	12.95	13.32	12.38	11.95	11.97	...	10.66	10.74	10.87	10.97	10.76	10.90
	.58	10.73	10.87	9.72	8.47	8.51	8.36	7.68	...	5.22	5.66	6.08	6.05	5.71	5.59
	.10	15.30	16.40	12.80	11.10	12.50	13.70	12.20	...	12.27	12.94	11.42	9.14	7.57	6.16

	.45	7.69	6.60	8.56	10.24	11.77	11.16	11.15	...	6.60	7.54	6.86	6.08	5.32	5.05
	.35	12.51	12.70	12.47	12.13	12.21	12.12	11.86	...	12.23	12.76	12.79	12.62	12.68	12.32
	.32	8.31	8.35	8.34	8.96	9.59	10.20	10.81	...	13.17	13.27	13.47	13.77	13.43	13.30
	.95	29.98	29.92	29.89	29.89	29.87	29.91	29.95	...	24.73	24.56	24.89	25.15	26.54	27.04
	.90	19.37	19.70	18.43	16.81	15.30	13.64	12.00	...	7.85	8.61	9.36	10.13	10.87	11.63

```
In [17]: a3=a1.head(5)
a3
```

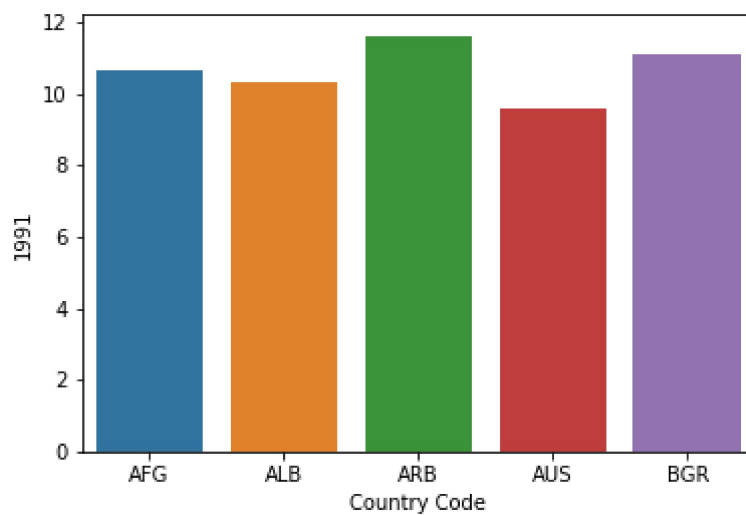
Out[17]:

	Country Name	Country Code	1991	1992	1993	1994	1995	1996	1997	1998	...	2012	2013
1	Afghanistan	AFG	10.65	10.82	10.72	10.73	11.18	10.96	10.78	10.80	...	11.34	11.19
4	Albania	ALB	10.31	30.01	25.26	20.84	14.61	13.93	16.88	20.05	...	13.38	15.87
5	Arab World	ARB	11.62	12.12	12.86	12.95	13.32	12.38	11.95	11.97	...	10.66	10.74
9	Australia	AUS	9.58	10.73	10.87	9.72	8.47	8.51	8.36	7.68	...	5.22	5.66
17	Bulgaria	BGR	11.10	15.30	16.40	12.80	11.10	12.50	13.70	12.20	...	12.27	12.94

5 rows × 33 columns

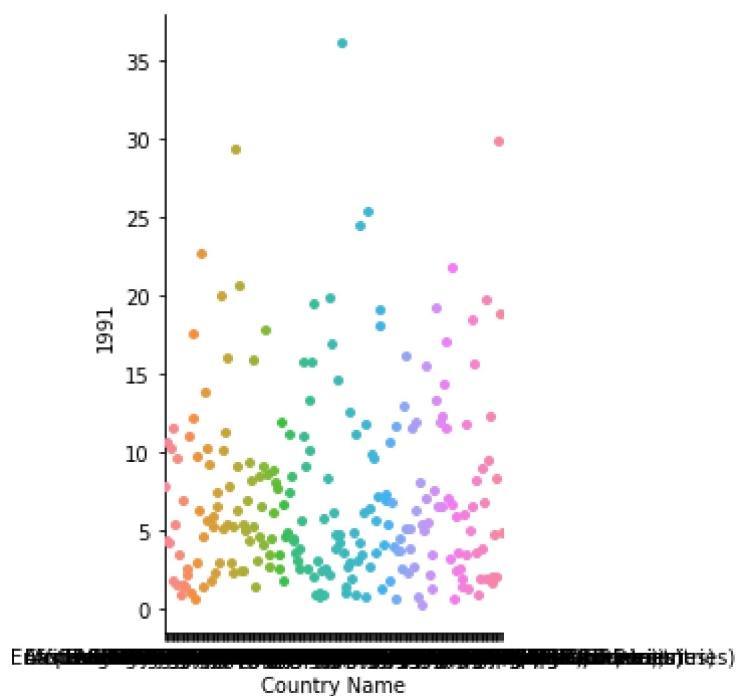
```
In [20]: sns.barplot(x="Country Code",y="1991",data=a3)
```

```
Out[20]: <AxesSubplot:xlabel='Country Code', ylabel='1991'>
```



```
In [35]: sns.catplot(x="Country Name",y="1991",data=a,kind="swarm")
```

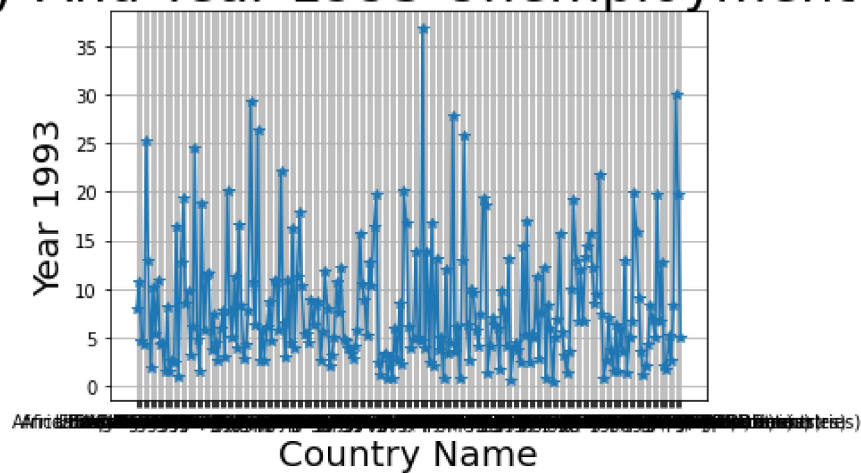
```
Out[35]: <seaborn.axisgrid.FacetGrid at 0x1d269a10790>
```



```
In [30]: plt.plot(a["Country Name"],a["1993"],marker="*")
plt.grid()
plt.xlabel("Country Name",size=20)
plt.ylabel("Year 1993",size=20)
plt.title("Country And Year 1993 Unemployment Ratio",size=30)
```

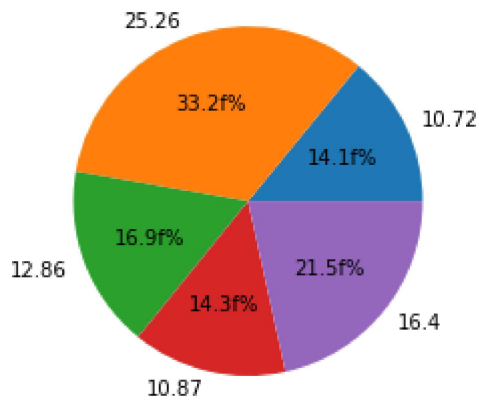
```
Out[30]: Text(0.5, 1.0, 'Country And Year 1993 Unemployment Ratio')
```

Country And Year 1993 Unemployment Ratio

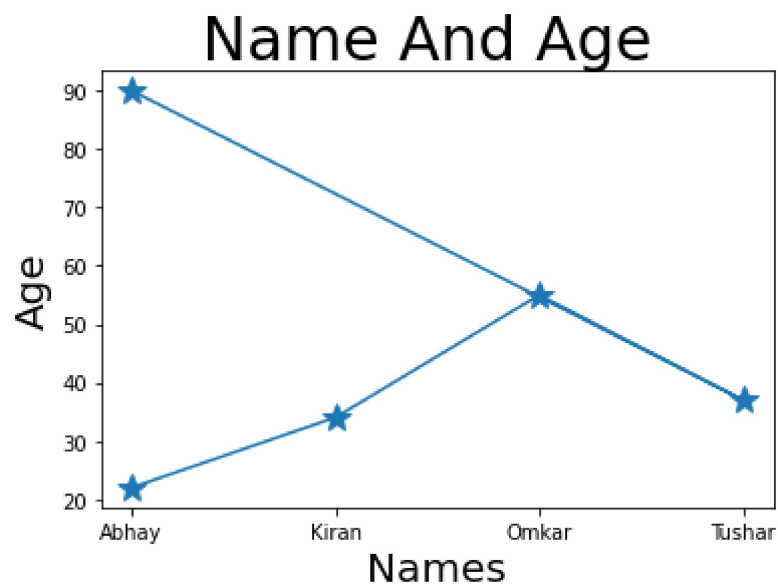


```
In [37]: plt.pie(a3["1993"], autopct="%1.1ff%", labels=a3["1993"])
```

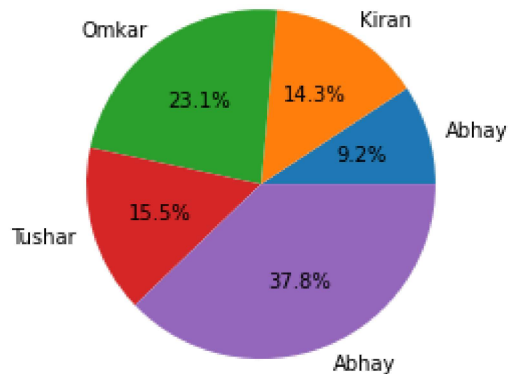
```
Out[37]: ([<matplotlib.patches.Wedge at 0x1d26ab18040>,
<matplotlib.patches.Wedge at 0x1d26ab187c0>,
<matplotlib.patches.Wedge at 0x1d26ab18100>,
<matplotlib.patches.Wedge at 0x1d26ab1c850>,
<matplotlib.patches.Wedge at 0x1d26ab20040>],
[Text(0.9940573500374277, 0.47100953794649125, '10.72'),
Text(-0.384246198710106, 1.03070600016534, '25.26'),
Text(-1.0296713713389896, -0.3870101640072066, '12.86'),
Text(-0.25267110558126465, -1.0705873679454385, '10.87'),
Text(0.8574404414133437, -0.689054344321905, '16.4')],
[Text(0.542213100020415, 0.2569142934253588, '14.1f%'),
Text(-0.2095888356600578, 0.5622032728174581, '33.2f%'),
Text(-0.561638929821267, -0.21109645309483996, '16.9f%'),
Text(-0.13782060304432617, -0.5839567461520573, '14.3f%'),
Text(0.4676947862254602, -0.37584782417558454, '21.5f%')])
```



```
In [39]: x=["Abhay","Kiran","Omkar","Tushar","Abhay"]  
y=[22,34,55,37,90]  
plt.plot(x,y,marker="*",markersize=15)  
plt.xlabel("Names",size=20)  
plt.ylabel("Age",size=20)  
plt.title("Name And Age ",size=30)  
plt.show()
```




```
In [47]: x=["Abhay", "Kiran", "Omkar", "Tushar", "Abhay"]
y=[22, 34, 55, 37, 90]
plt.pie(y, labels=x, autopct="%1.1f%%")
plt.show()
```



```
In [48]: a5=a.loc[(a["2021"]>10)]
a5
```

Out[48]:

	Country Name	Country Code	1991	1992	1993	1994	1995	1996	1997	1998	...	2012	2013
1	Afghanistan	AFG	10.65	10.82	10.72	10.73	11.18	10.96	10.78	10.80	...	11.34	11.19
4	Albania	ALB	10.31	30.01	25.26	20.84	14.61	13.93	16.88	20.05	...	13.38	15.87
5	Arab World	ARB	11.62	12.12	12.86	12.95	13.32	12.38	11.95	11.97	...	10.66	10.74
7	Argentina	ARG	5.44	6.36	10.10	11.76	18.80	17.11	14.82	12.65	...	7.22	7.10
8	Armenia	ARM	1.60	1.80	5.30	6.60	6.70	9.30	10.80	9.40	...	17.30	16.18
...
224	St. Vincent and the Grenadines	VCT	19.77	19.69	19.74	20.19	19.99	20.38	20.44	20.57	...	18.97	18.99
226	Virgin Islands (U.S.)	VIR	12.35	12.51	12.70	12.47	12.13	12.21	12.12	11.86	...	12.23	12.76
231	Yemen, Rep.	YEM	8.32	8.31	8.35	8.34	8.96	9.59	10.20	10.81	...	13.17	13.27
232	South Africa	ZAF	29.95	29.98	29.92	29.89	29.89	29.87	29.91	29.95	...	24.73	24.56
233	Zambia	ZMB	18.90	19.37	19.70	18.43	16.81	15.30	13.64	12.00	...	7.85	8.61

62 rows × 33 columns



```
In [52]: c=[]
         for x in a5["2021"]:
             x1=x+10
             c.append(x1)
         a5.insert(33,"New_2021",c)
```

```
In [55]: a5
```

Out[55]:

1992	1993	1994	1995	1996	1997	1998	...	2013	2014	2015	2016	2017	2018	2019	:
0.82	10.72	10.73	11.18	10.96	10.78	10.80	...	11.19	11.14	11.13	11.16	11.18	11.15	11.22	1
10.01	25.26	20.84	14.61	13.93	16.88	20.05	...	15.87	18.05	17.19	15.42	13.62	12.30	11.47	1
2.12	12.86	12.95	13.32	12.38	11.95	11.97	...	10.74	10.87	10.97	10.76	10.90	10.50	10.01	1
6.36	10.10	11.76	18.80	17.11	14.82	12.65	...	7.10	7.27	7.52	8.11	8.35	9.22	9.84	1
1.80	5.30	6.60	6.70	9.30	10.80	9.40	...	16.18	17.50	18.26	17.62	17.70	18.97	18.30	2
...	
9.69	19.74	20.19	19.99	20.38	20.44	20.57	...	18.99	19.05	19.09	19.11	19.18	19.18	19.28	2
2.51	12.70	12.47	12.13	12.21	12.12	11.86	...	12.76	12.79	12.62	12.68	12.32	12.43	12.47	1
8.31	8.35	8.34	8.96	9.59	10.20	10.81	...	13.27	13.47	13.77	13.43	13.30	13.15	13.06	1
19.98	29.92	29.89	29.89	29.87	29.91	29.95	...	24.56	24.89	25.15	26.54	27.04	26.91	28.47	2
9.37	19.70	18.43	16.81	15.30	13.64	12.00	...	8.61	9.36	10.13	10.87	11.63	12.01	12.52	1

```
In [ ]:
```