Name:-Divya Agarwal

Reg no:-21MCA0176 Subject:-Python

Lab

Assignment 5

1. Take a dataset of your choice and perform 5 different data visualisation charts using seaborn

Importing the necessary libraries to visualize the dataset.

```
import pandas as pd  import
matplotlib.pyplot as plt  data =
pd.read_csv('./diabetes.csv')  data
```

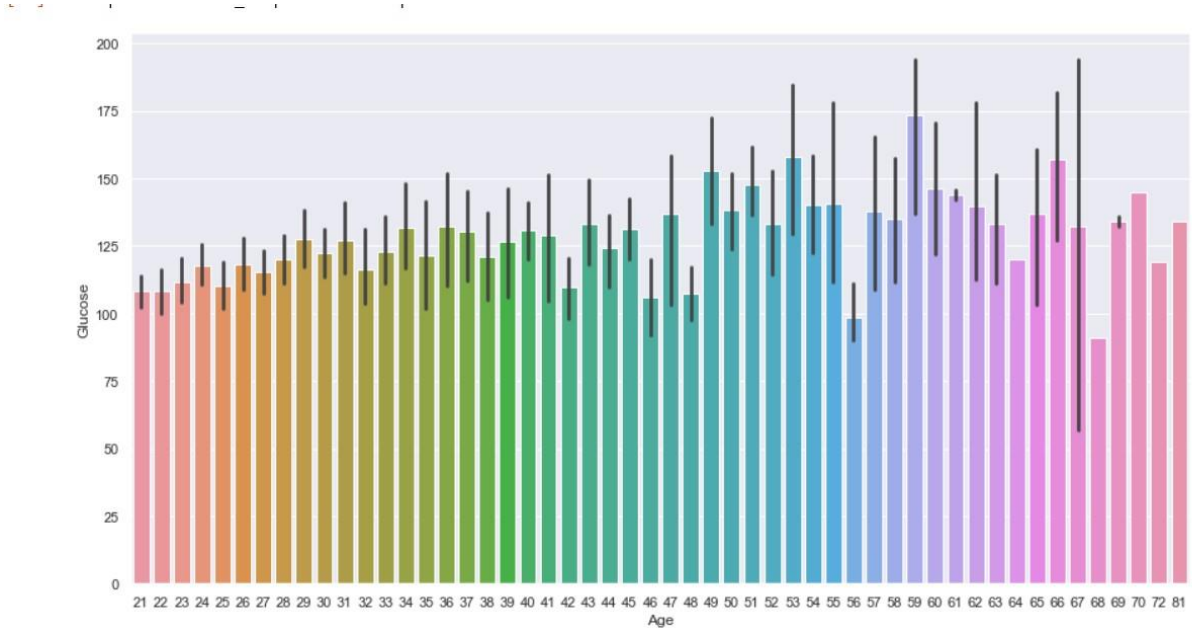
Out[5]:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
0	6	148	72	35	0	33.6	0.627	50	1
1	1	85	66	29	0	26.6	0.351	31	0
2	8	183	64	0	0	23.3	0.672	32	1
3	1	89	66	23	94	28.1	0.167	21	0
4	0	137	40	35	168	43.1	2.288	33	1
...	...	...	...	...	...	...	...	...	...
763	10	101	76	48	180	32.9	0.171	63	0
764	2	122	70	27	0	36.8	0.340	27	0
765	5	121	72	23	112	26.2	0.245	30	0
766	1	126	60	0	0	30.1	0.349	47	1
767	1	93	70	31	0	30.4	0.315	23	0

768 rows × 9 columns

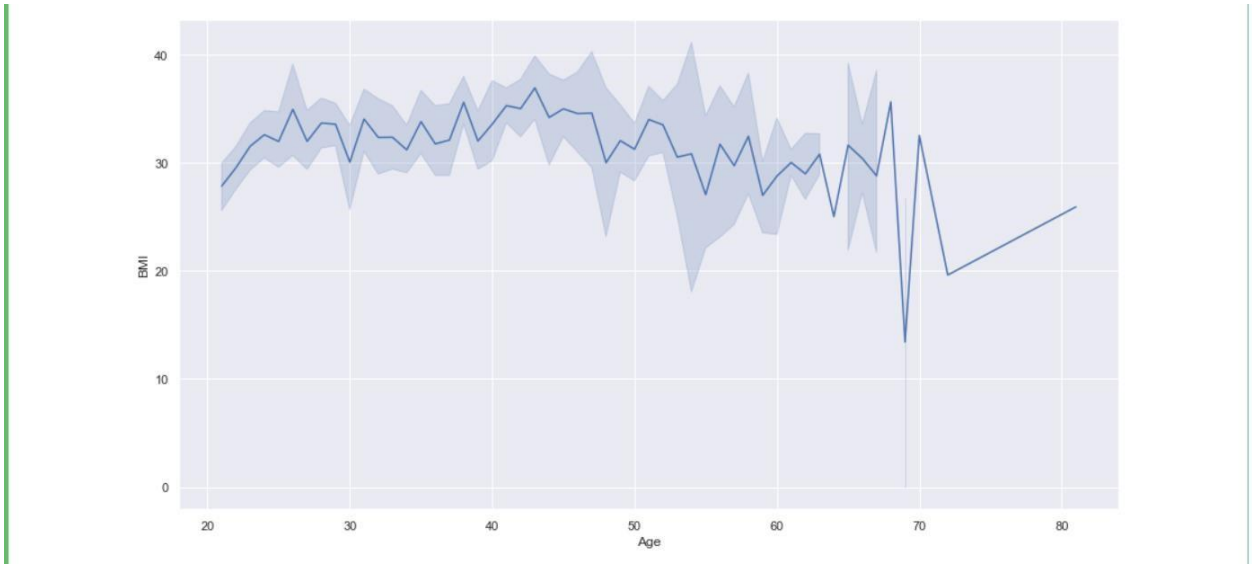
Barplot

```
sb.set(rc = {'figure.figsize':(15,8)})
sb.barplot(data['Age'],data['Glucose'])
```



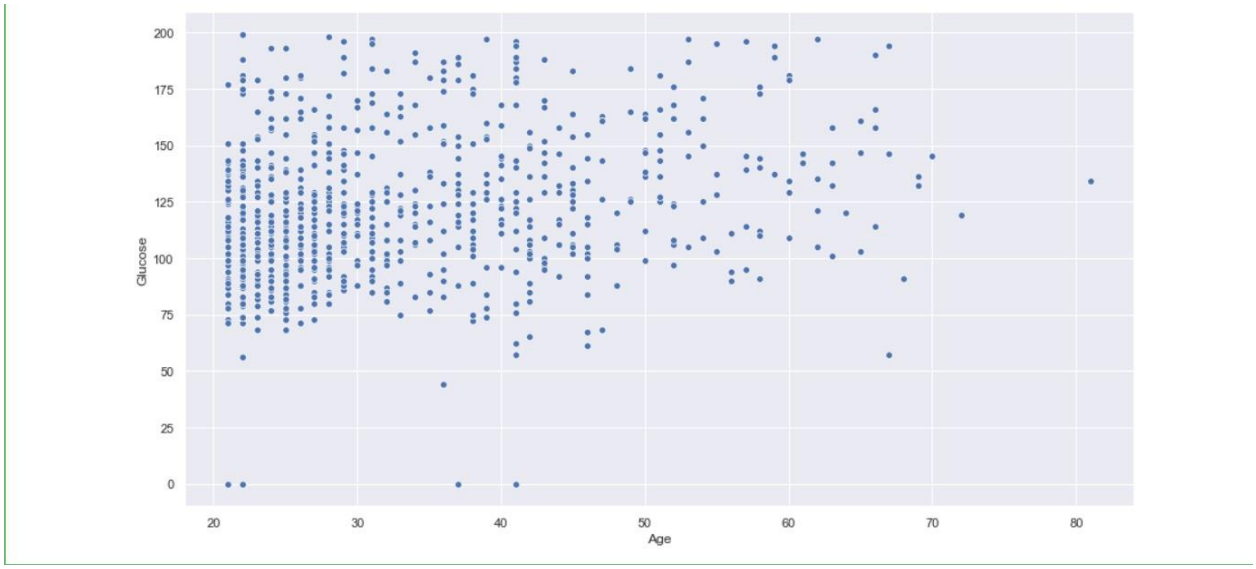
Lineplot

sb.lineplot(data['Age'],data['BMI'])



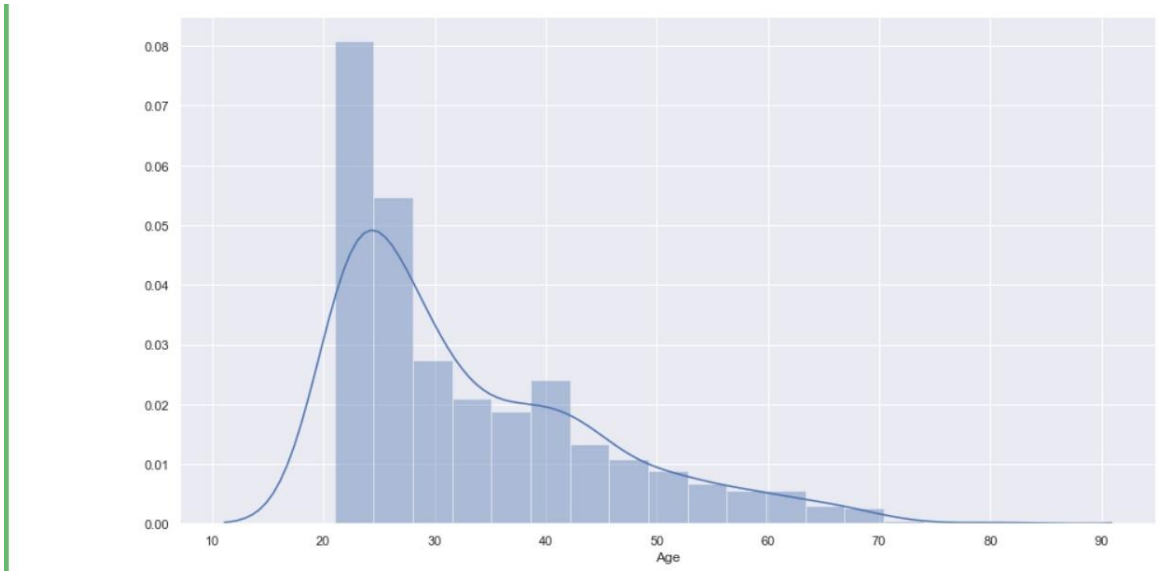
Scatterplot

sb.scatterplot(data=data, x=data['Age'], y=data['Glucose'])



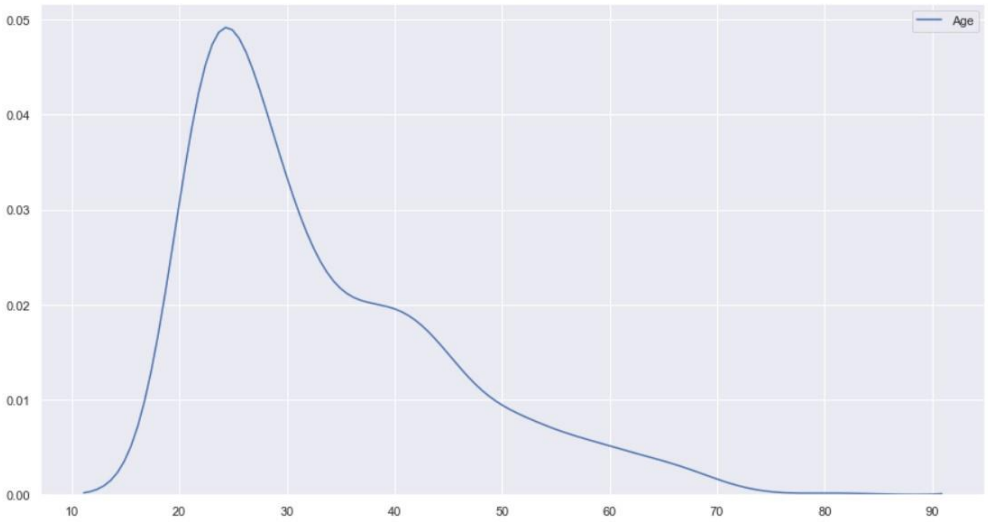
Distplot

sb.distplot(data['Age'])



Kdeplot

sb.kdeplot(age);



2) Take a dataset of your choice and perform 5 different data visualisation charts using matplotlib

```
import pandas as pd  import
matplotlib.pyplot as plt
data = pd.read_csv('./COVID-19 Coronavirus.csv')  data
```

Out[5]:

	Country	Other names	ISO 3166-1 alpha-3 CODE	Population	Continent	Total Cases	Total Deaths	Tot Cases//1M pop	Tot Deaths/1M pop	Death percentage
0	Afghanistan	Afghanistan	AFG	40462186	Asia	177827	7671	4395	190	4.313743
1	Albania	Albania	ALB	2872296	Europe	273870	3492	95349	1216	1.275058
2	Algeria	Algeria	DZA	45236699	Africa	265691	6874	5873	152	2.587216
3	Andorra	Andorra	AND	77481	Europe	40024	153	516565	1975	0.382271
4	Angola	Angola	AGO	34654212	Africa	99194	1900	2862	55	1.915438
...	...	...	...	...	...	...	...	...	...	...
220	Wallis and Futuna	Wallis and Futuna Islands	WLF	10894	Oceania	454	7	41674	643	1.541850
221	Western Sahara	Western Sahara	ESHÂ	623031	Africa	10	1	16	2	10.000000
222	Yemen	Yemen	YEM	30975258	Asia	11806	2143	381	69	18.151787
223	Zambia	Zambia	ZMB	19284482	Africa	317076	3967	16442	206	1.251120
224	Zimbabwe	Zimbabwe	ZWE	15241601	Africa	246525	5446	16174	357	2.209107

225 rows × 10 columns

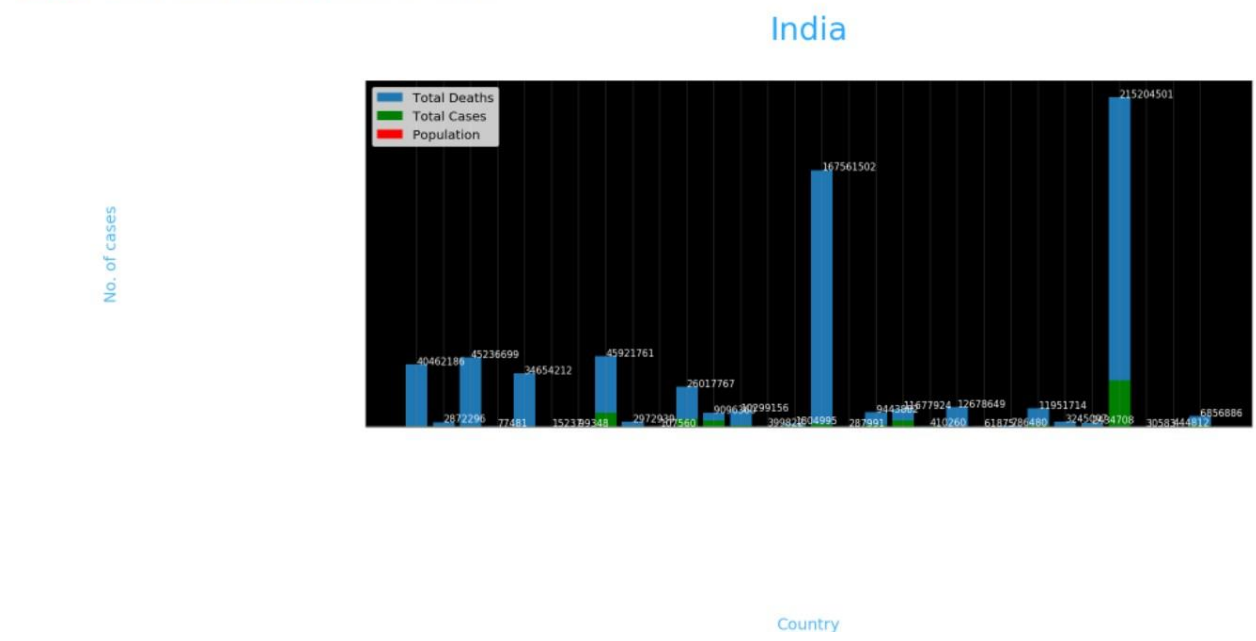
Bar Chart

```
re=data.iloc[:30,5].values de=data.iloc[:30,4].values
co=data.iloc[:30,3].values
x=list(data.iloc[:30,0])

plt.figure(figsize=(25,10))
ax=plt.axes()

ax.set_facecolor('black') ax.grid(linewidth=0.4,
color='#8f8f8f')


plt.xticks(rotation='vertical',
size='20',
          color='white')#ticks of X

plt.yticks(size='20',color='white')


ax.set_xlabel('\nCountry',size=25,
color='#4bb4f2') ax.set_ylabel('No. of
cases\n',size=25,              color='#4bb4f2')


plt.tick_params(size=20,color='white')


ax.set_title('India\n',
size=50,color='#28a9ff')
```

plt.bar(x,co,label='re') plt.bar(x,re,label='re',color='green')
plt.bar(x,de,label='re',color='red')

for i,j in zip(x,co):
ax.annotate(str(int(j)),
xy=(i,j+3),
color='white', size='15')

plt.legend(['Total Deaths','Total Cases','Population'],
fontsize=20)



Scatter Plot

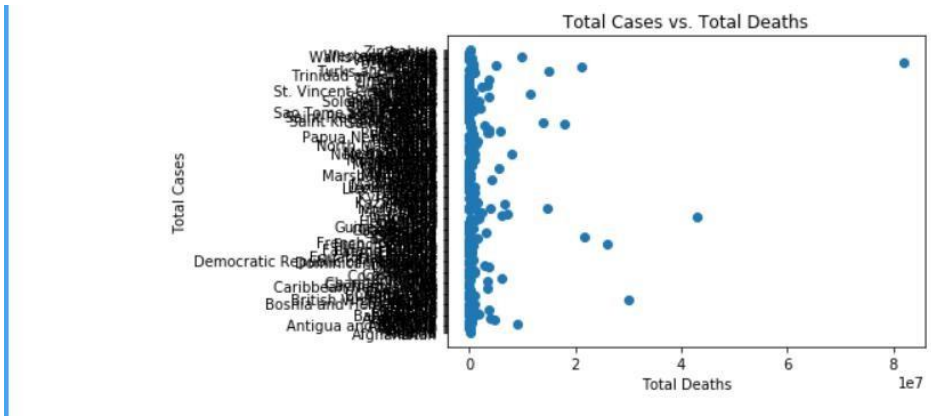
plt.scatter(data['Total Cases'], data['Country'])

plt.title('Total Cases vs. Total Deaths')

plt.ylabel('Total Cases')

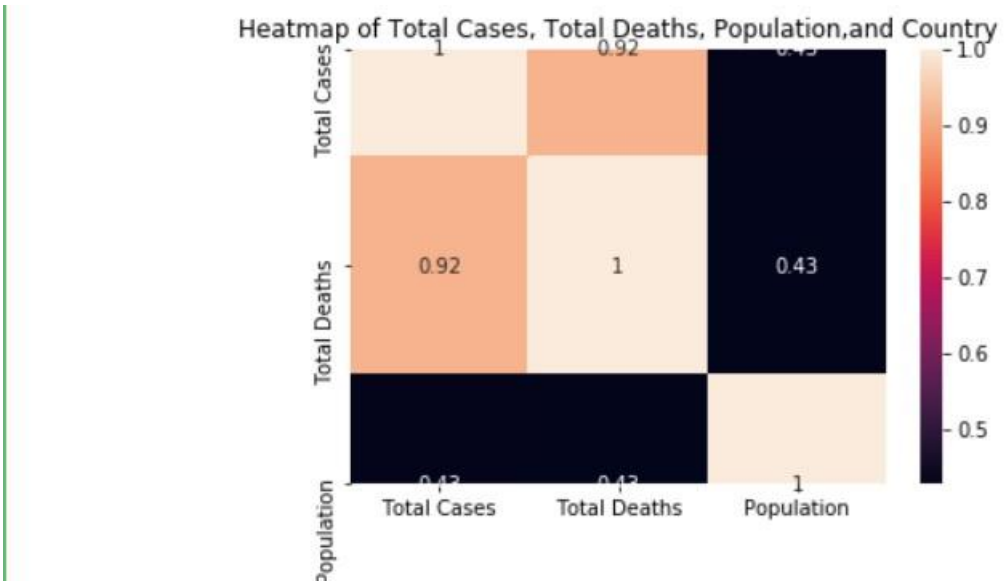
plt.xlabel('Total Deaths')

plt.show()



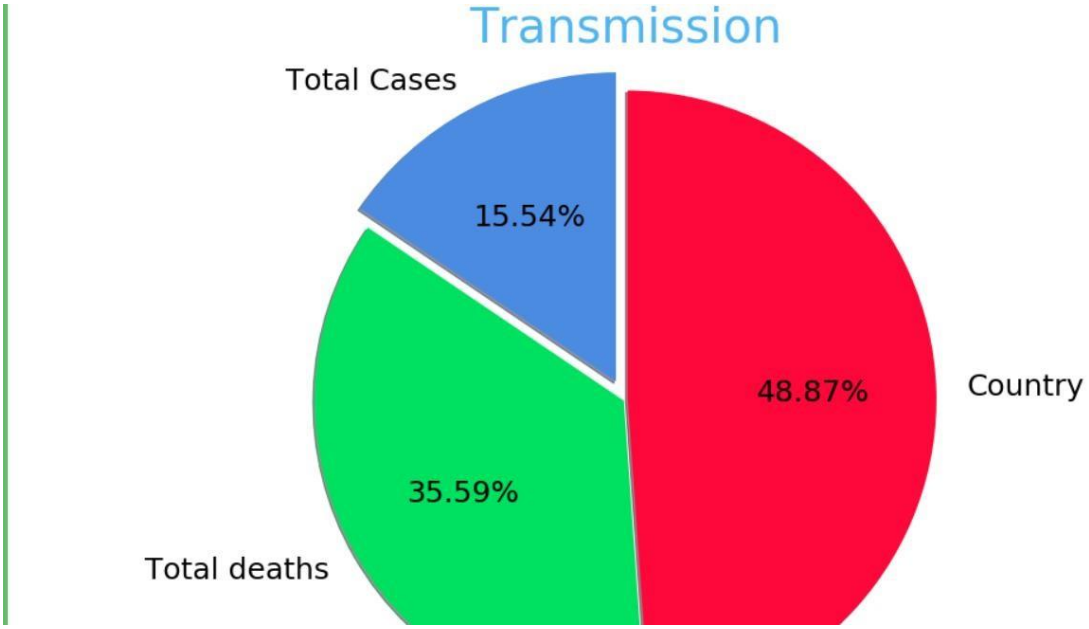
Heat Map

corr = data[['Total Cases', 'Total Deaths', 'Population', 'Country']].corr()
plt.title('Heatmap of Total Cases, Total Deaths, Population,and Country')
sb.heatmap(corr, annot=True)
plt.show()



Pie Chart

```
slices = [62, 142, 195]
activities = ['Total Cases', 'Total deaths', 'Country']

cols=['#4C8BE2','#00e061','#fe073a'] exp
= [0.2,0.02,0.02]

plt.pie(slices,labels=activities,
textprops=dict(size=25,color='black'),
radius=3,        colors=cols,
autopct='%2.2f%%',        explode=exp,
shadow=True,
       startangle=90)

plt.title('Transmission\n\n\n\n',color='#4fb4f2',size=40)
```



Histogram

```
plt.hist(data['Total Cases'])
```