MORNING SESSION

ASSIGNMENT-2

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```
1 import seaborn as sns
2 print(sns.get_dataset_names())
```

```
['anagrams', 'anscombe', 'attention', 'brain_networks', 'car_crashes', 'diamonds', 'dots', 'dowjones', 'exercise', 'flights', 'fmri', 'geyser', 'glue', 'healthexp', 'iris', 'mpg', 'penguins', 'planets', 'seaice', 'taxis', 'tips', 'titanic']
```

```
[2] 1 df=sns.load_dataset('car_crashes')
    2 df
```

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses	abbrev
0	18.8	7.332	5.640	18.048	15.040	784.55	145.08	AL
1	18.1	7.421	4.525	16.290	17.014	1053.48	133.93	AK
2	18.6	6.510	5.208	15.624	17.856	899.47	110.35	AZ
3	22.4	4.032	5.824	21.056	21.280	827.34	142.39	AR
4	12.0	4.200	3.360	10.920	10.680	878.41	165.63	CA
5	13.6	5.032	3.808	10.744	12.920	835.50	139.91	CO
6	10.8	4.968	3.888	9.396	8.856	1068.73	167.02	CT
7	16.2	6.156	4.860	14.094	16.038	1137.87	151.48	DE
8	5.9	2.006	1.593	5.900	5.900	1273.89	136.05	DC
9	17.9	3.759	5.191	16.468	16.826	1160.13	144.18	FL
10	15.6	2.964	3.900	14.820	14.508	913.15	142.80	GA
11	17.5	9.450	7.175	14.350	15.225	861.18	120.92	HI
12	15.3	5.508	4.437	13.005	14.994	641.96	82.75	ID
13	12.8	4.608	4.352	12.032	12.288	803.11	139.15	IL
14	14.5	3.625	4.205	13.775	13.775	710.46	108.92	IN
15	15.7	2.669	3.925	15.229	13.659	649.06	114.47	IA
16	17.8	4.806	4.272	13.706	15.130	780.45	133.80	KS
17	21.4	4.066	4.922	16.692	16.264	872.51	137.13	KY
18	20.5	7.175	6.765	14.965	20.090	1281.55	194.78	LA

```
1 df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 51 entries, 0 to 50
Data columns (total 8 columns):
 #   Column          Non-Null Count  Dtype
---  ------          --------------  -----
 0   total           51 non-null     float64
 1   speeding        51 non-null     float64
 2   alcohol         51 non-null     float64
 3   not_distracted  51 non-null     float64
 4   no_previous     51 non-null     float64
 5   ins_premium     51 non-null     float64
 6   ins_losses      51 non-null     float64
 7   abbrev          51 non-null     object
dtypes: float64(7), object(1)
memory usage: 3.3+ KB
```

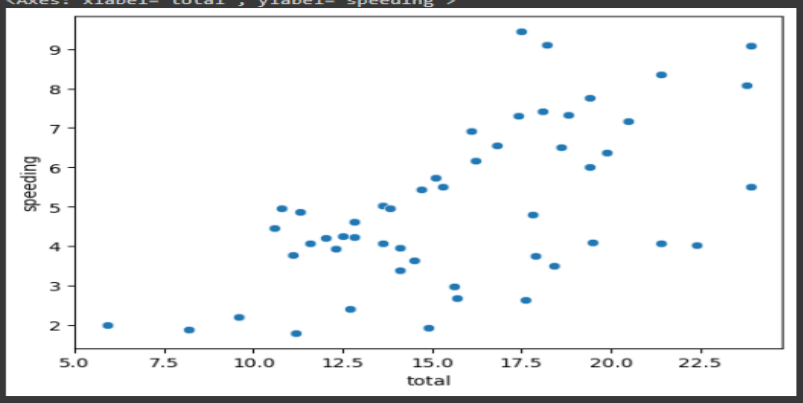
```
[4] 1 df.describe()
```

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses
count	51.000000	51.000000	51.000000	51.000000	51.000000	51.000000	51.000000
mean	15.790196	4.998196	4.886784	13.573176	14.004882	886.957647	134.493137
std	4.122002	2.017747	1.729133	4.508977	3.764672	178.296285	24.835922
min	5.900000	1.792000	1.593000	1.760000	5.900000	641.960000	82.750000
25%	12.750000	3.766500	3.894000	10.478000	11.348000	768.430000	114.645000
50%	15.600000	4.608000	4.554000	13.857000	13.775000	858.970000	136.050000
75%	18.500000	6.439000	5.604000	16.140000	16.755000	1007.945000	151.870000
max	23.900000	9.450000	10.038000	23.661000	21.280000	1301.520000	194.780000

SCATTERPLOT

```
1 sns.scatterplot(x="total",y="speeding",data=df)
```

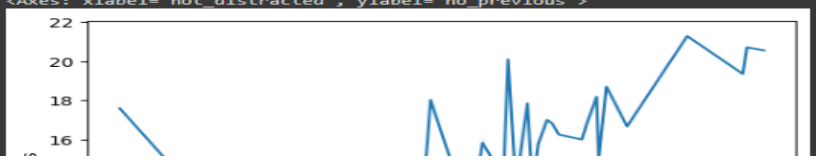
```
<Axes: xlabel='total', ylabel='speeding'>
```



INFERENCE: as the speeding increases the total also increases

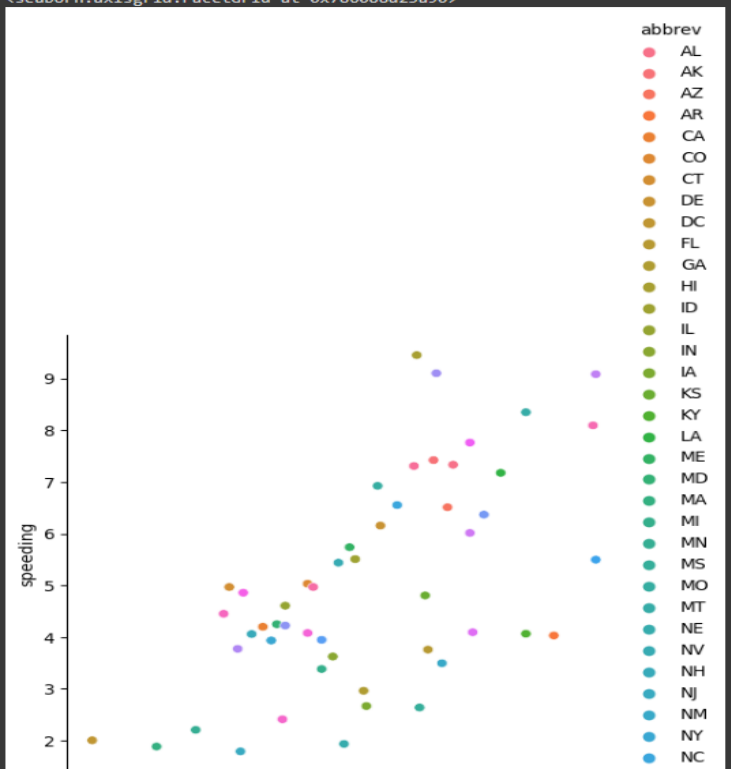
```
[ ]  1 sns.lineplot(x="not_distracted",y="no_previous",data=df)
```

```
<Axes: xlabel='not_distracted', ylabel='no_previous'>
```




```
[8]  1 sns.relplot(x="total",y="speeding",data=df,hue="abbrev")
```

```
<seaborn.axisgrid.FacetGrid at 0x786088d23a90>
```

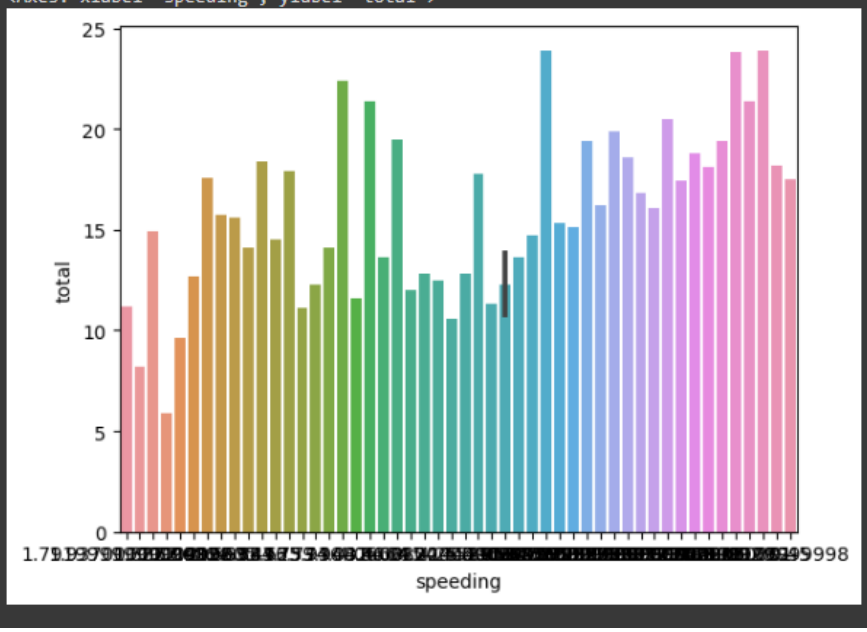


```
[11] 1 df["abbrev"].value_counts()
```

```
AL    1
PA    1
NV    1
NH    1
NJ    1
NM    1
NY    1
NC    1
ND    1
OH    1
OK    1
OR    1
RI    1
MT    1
SC    1
SD    1
TN    1
TX    1
UT    1
VT    1
VA    1
WA    1
WV    1
WI    1
NE    1
MO    1
```

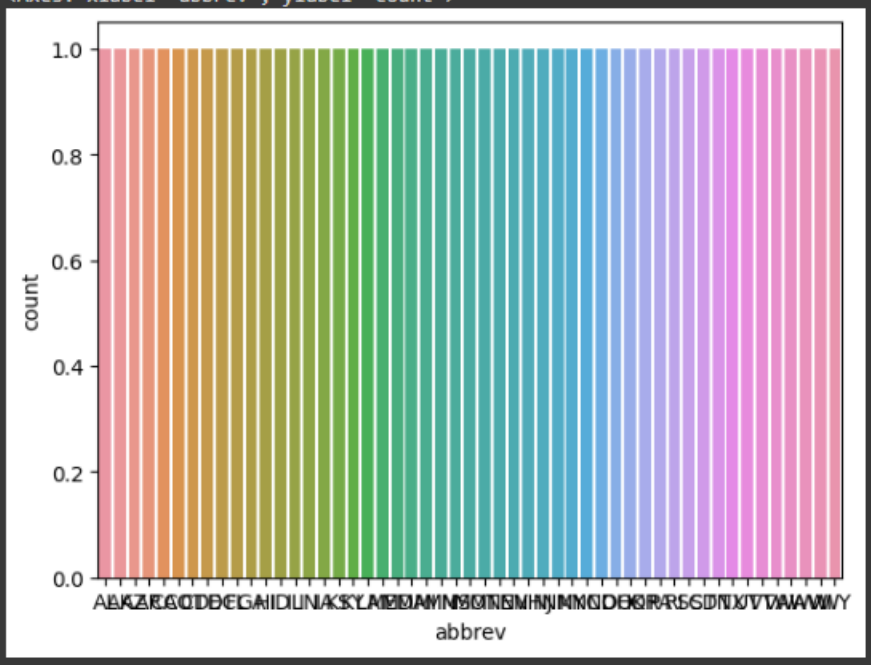
```
[ ] 1 sns.barplot(data=df,x="speeding",y="total")
```

```
<Axes: xlabel='speeding', ylabel='total'>
```



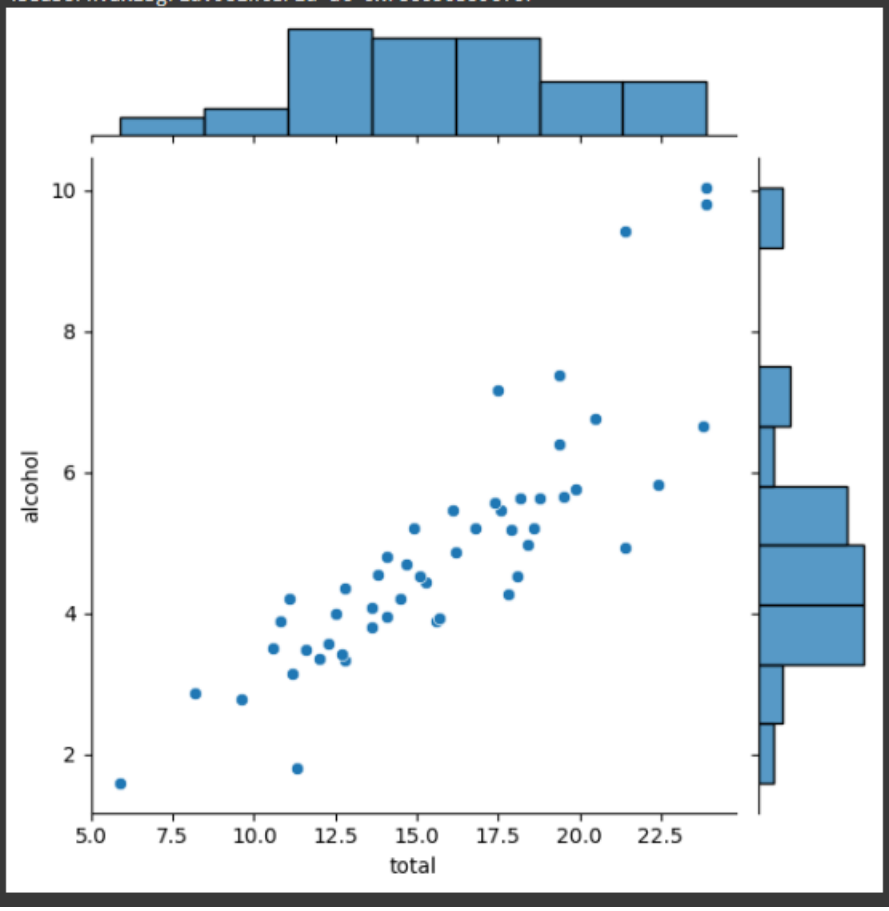
```
[13] 1 sns.countplot(x="abbrev",data=df)
```

```
<Axes: xlabel='abbrev', ylabel='count'>
```



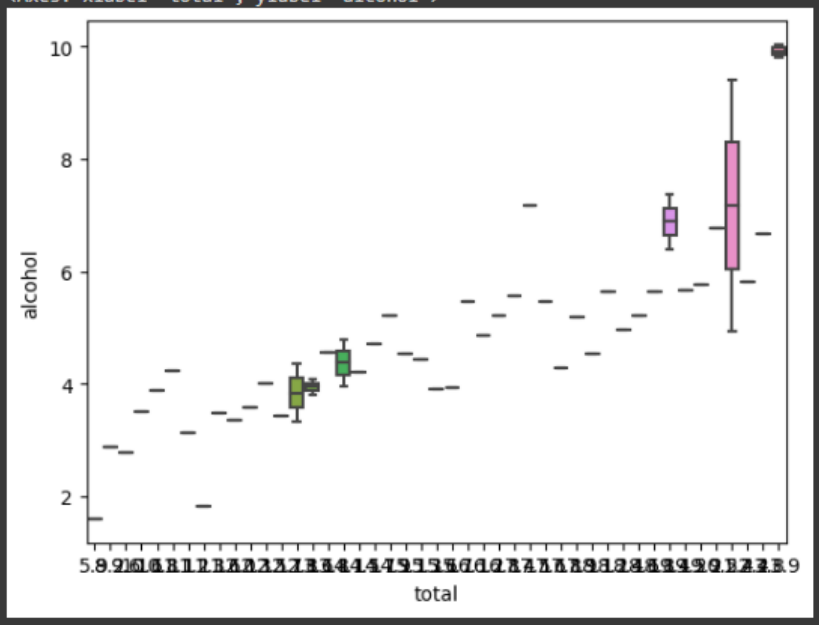

```
[14] 1 sns.jointplot(x="total",y="alcohol",data=df)
```

```
<seaborn.axisgrid.JointGrid at 0x786050b596f0>
```



```
[15]  1 sns.boxplot(x="total",y="alcohol",data=df)
```

```
<Axes: xlabel='total', ylabel='alcohol'>
```




```
[17]  1 corr=df.corr()
      2 corr
```

```
<ipython-input-17-7d5195e2bf4d>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a fu
  corr=df.corr()
```

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses
total	1.000000	0.611548	0.852613	0.827560	0.956179	-0.199702	-0.036011
speeding	0.611548	1.000000	0.669719	0.588010	0.571976	-0.077675	-0.065928
alcohol	0.852613	0.669719	1.000000	0.732816	0.783520	-0.170612	-0.112547
not_distracted	0.827560	0.588010	0.732816	1.000000	0.747307	-0.174856	-0.075970
no_previous	0.956179	0.571976	0.783520	0.747307	1.000000	-0.156895	-0.006359

```
1 sns.heatmap(corr,annot=True)
```

<Axes: >