assignment-2-animesh

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0.1 Name :- Animesh Verma‘

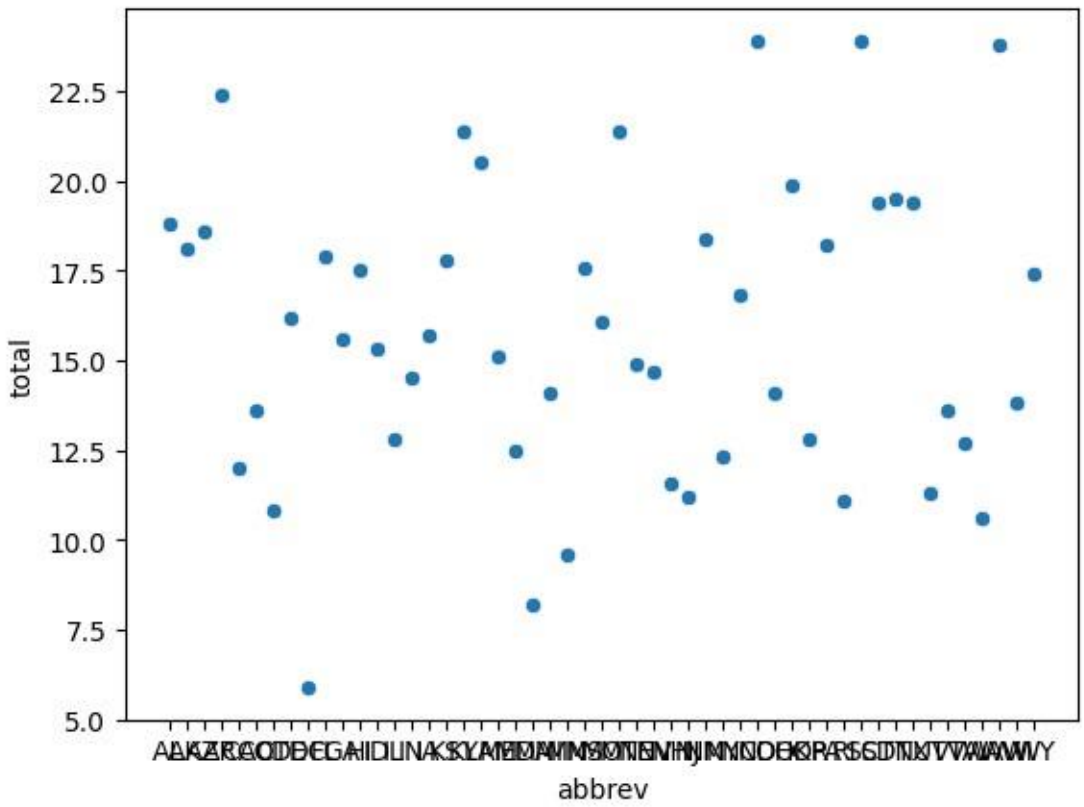
[15]:
```
import seaborn as sns
```

[16]:
```
# Import matplotlib to plot data.
import matplotlib.pyplot as plt
```

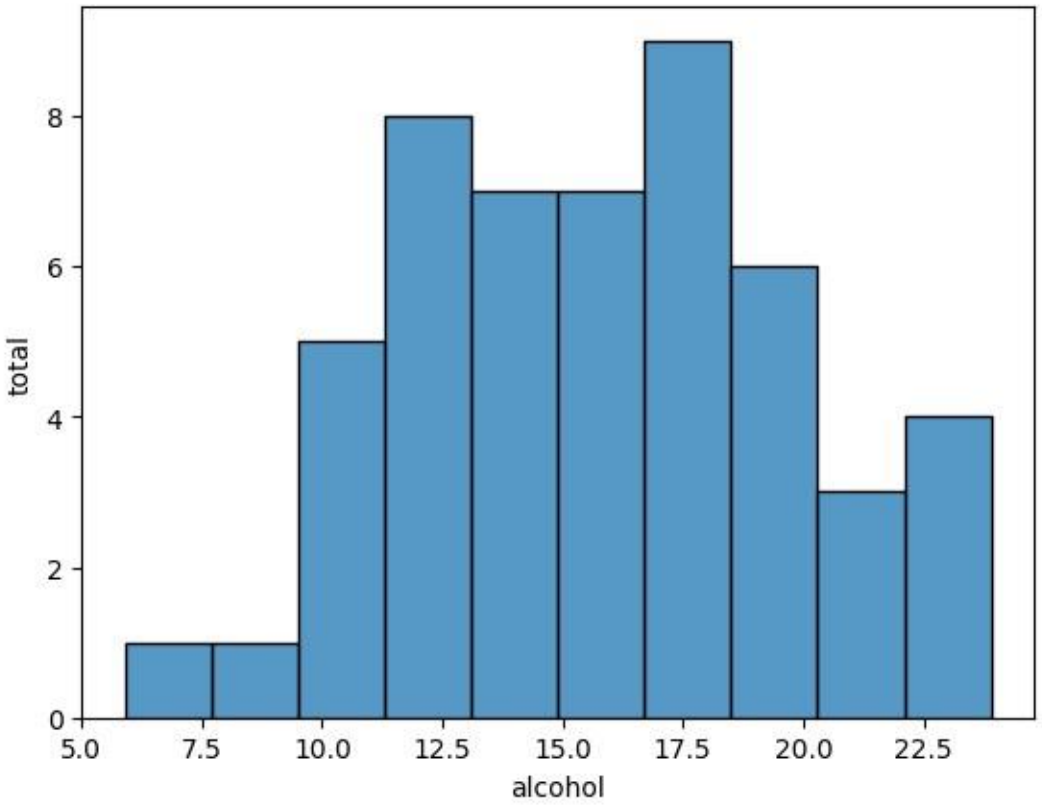
[17]:
```
#Load the data
car_data = sns.load_dataset('car_crashes')
car_data.head()
```

[17]:
```
 total speeding alcohol not_distracted no_previous ins_premium
0   18.8    7.332 5.640 18.048     15.040     784.55 \
1   18.1    7.421 4.525 16.290     17.014     1053.48
2   18.6    6.510 5.208 15.624     17.856     899.47
3   22.4    4.032 5.824 21.056     21.280     827.34
4   12.0    4.200 3.360 10.920     10.680     878.41

   ins_losses abbrev
0      145.08     AL
1      133.93     AK
2      110.35     AZ
3      142.39     AR
4      165.63     CA
```

[18]:
```
#Let's plot location vs total accidents.
x_location = "abbrev"
y_total = "total"

sns.scatterplot(x=x_location, y=y_total, data=car_data)

plt.xlabel(x_location)
plt.ylabel(y_total)
plt.show()
```

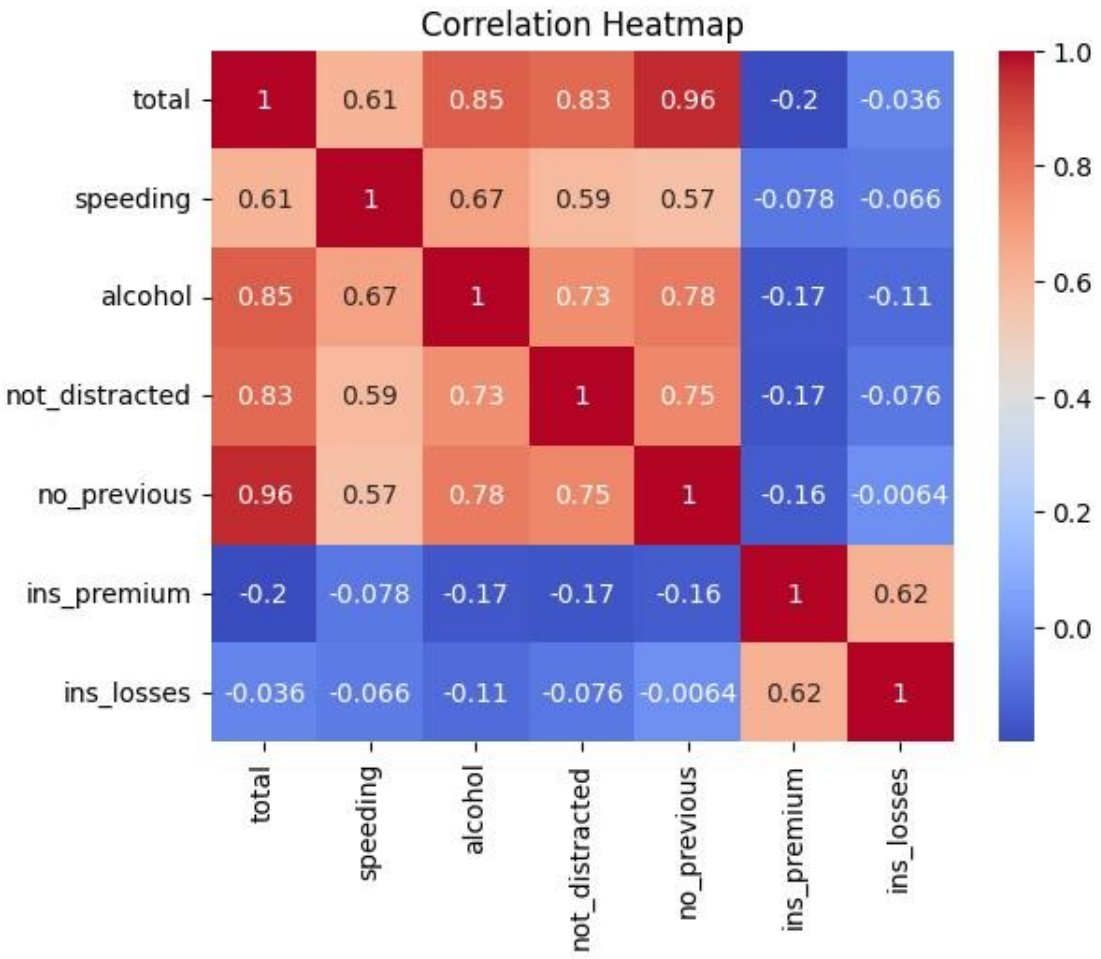


[19]:
```
#Let's plot alcohol vs total accidents.
x_location = "alcohol"
y_total = "total"

sns.histplot(data=car_data, x=y_total, bins=10)

plt.xlabel(x_location)
plt.ylabel(y_total)
plt.show()
```

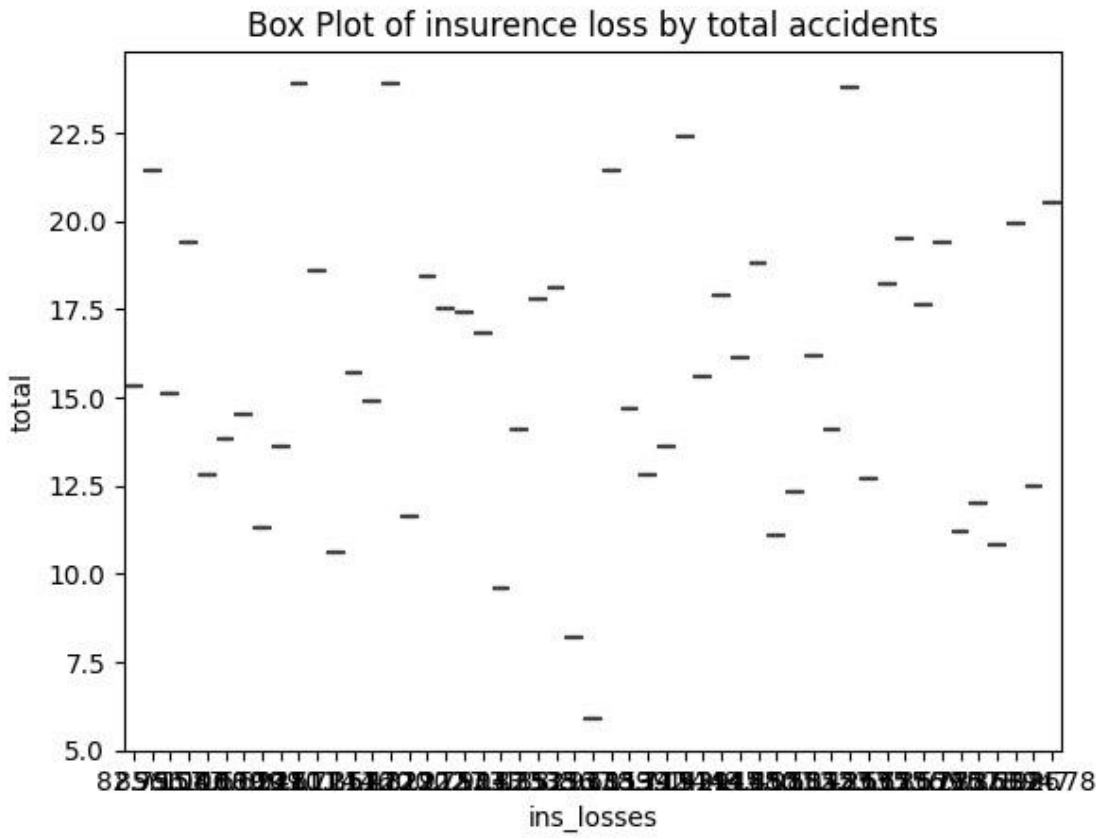


- between 12.5 to 17.5 we can see maximum.

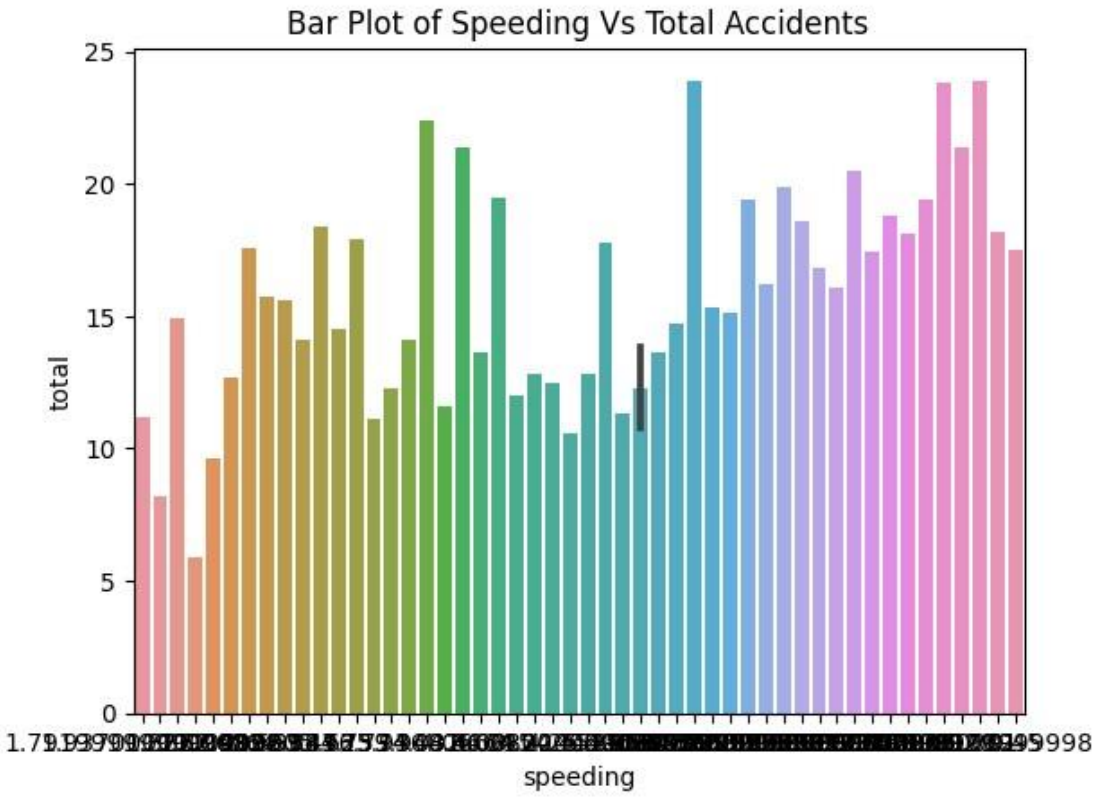
[20]:
```
#Let's plot heatmap

sliced_data = car_data.drop(columns=['abbrev'])

corr_matrix = sliced_data.corr()

sns.heatmap(corr_matrix, annot=True, cmap='coolwarm')
plt.title('Correlation Heatmap')
plt.show()
```



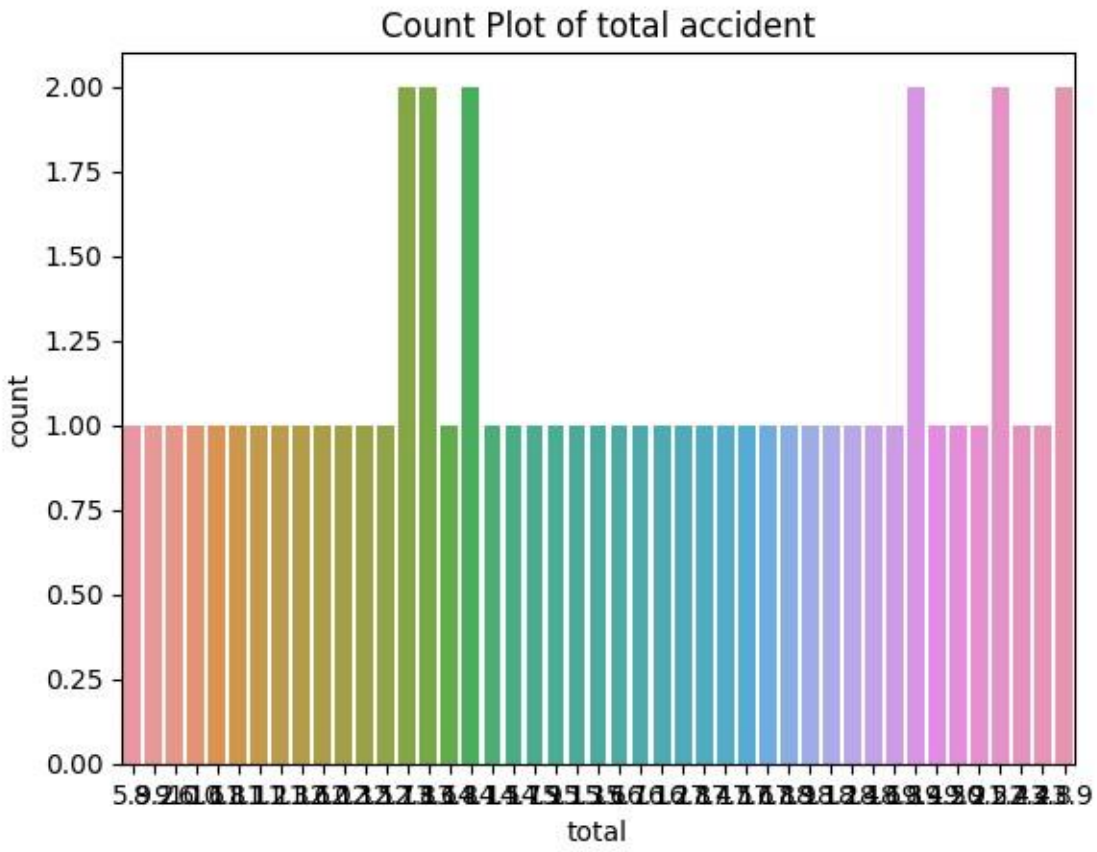
[21]:
```
#Let's see relation between loss and total accidents
sns.boxplot(data=car_data, x='ins_losses', y='total')
plt.title('Box Plot of insurence loss by total accidents')
plt.show()
```



[22]:
```
# Create a bar plot
sns.barplot(x='speeding',  ='total', data=car_data)
plt.title('Bar Plot of Speeding Vs Total Accidents ')
plt.show()
```

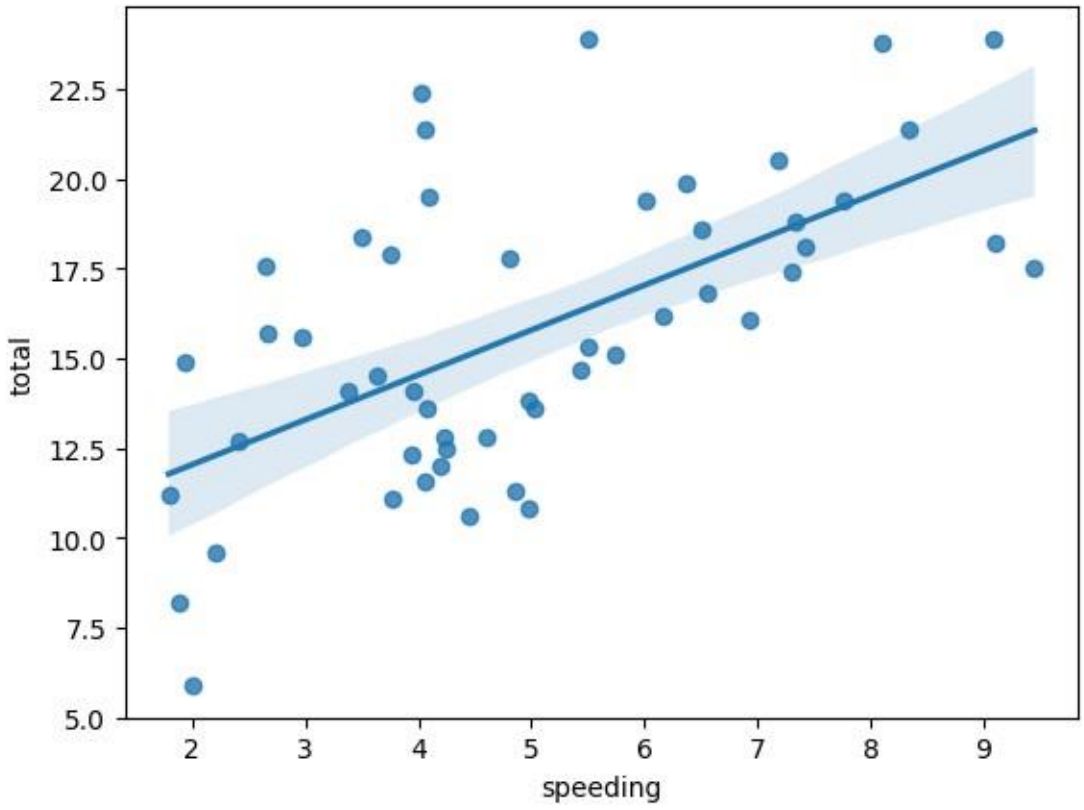


[23]:
```
#Let's Count plot data
# Create a count plot
sns.countplot(x='total', data=car_data)
plt.title('Count Plot of total accident ')
plt.show()
```



- the counts are almost constant
- not closely related

[26]:
```
# Create a regression plot for Speeding and
accidents sns.regplot(x='speeding', y='total',
data=car_data) plt.show()
```



0.1.1 This Regression plot Shows:

1. With increse in speed the accidents also increses.
2. There is less chances of accidents for less speed.