ai1648-vishruth-reddy-assignment-2

September 13, 2023

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

[4]:
```
data = pd.read_csv("/content/car_crashes.csv")
data.head()
```

[4]:

	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

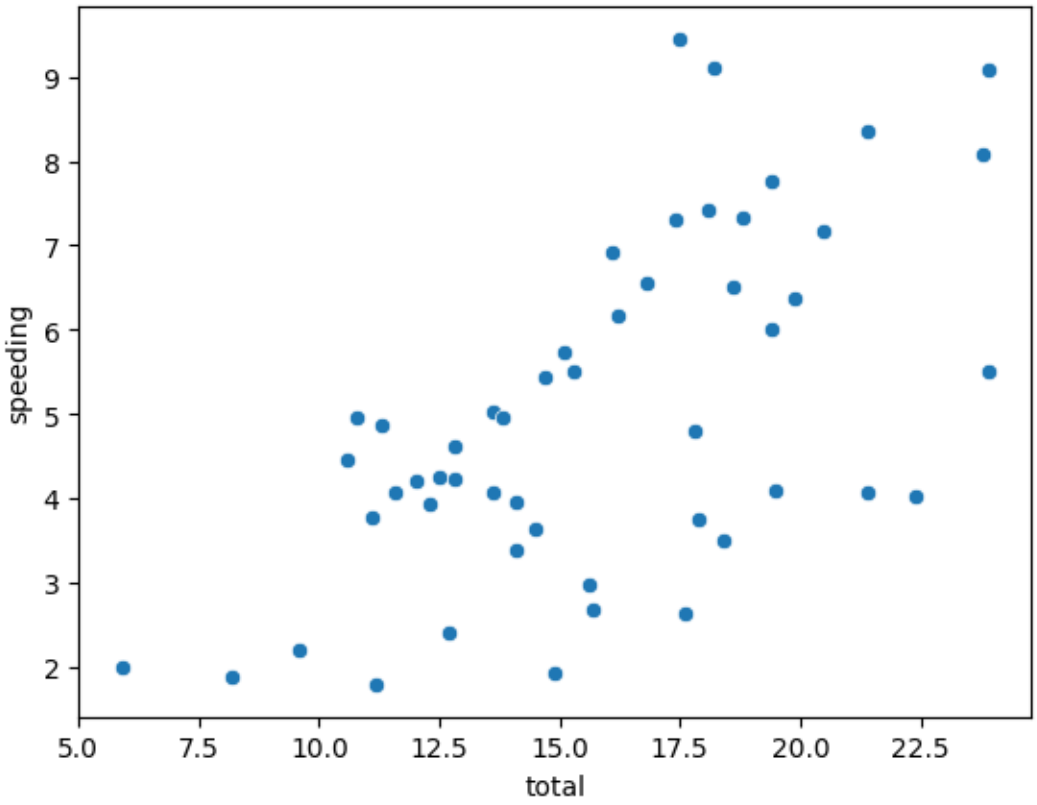
[5]:
```
data.tail()
```

[5]:

	total	speeding	alcohol	not_distracted	no_previous	ins_premium	ins_losses	abbrev
46	12.7	2.413	3.429	11.049	11.176	768.95	153.72	VA
47	10.6	4.452	3.498	8.692	9.116	890.03	111.62	WA
48	23.8	8.092	6.664	23.086	20.706	992.61	152.56	WV
49	13.8	4.968	4.554	5.382	11.592	670.31	106.62	WI
50	17.4	7.308	5.568	14.094	15.660	791.14	122.04	WY

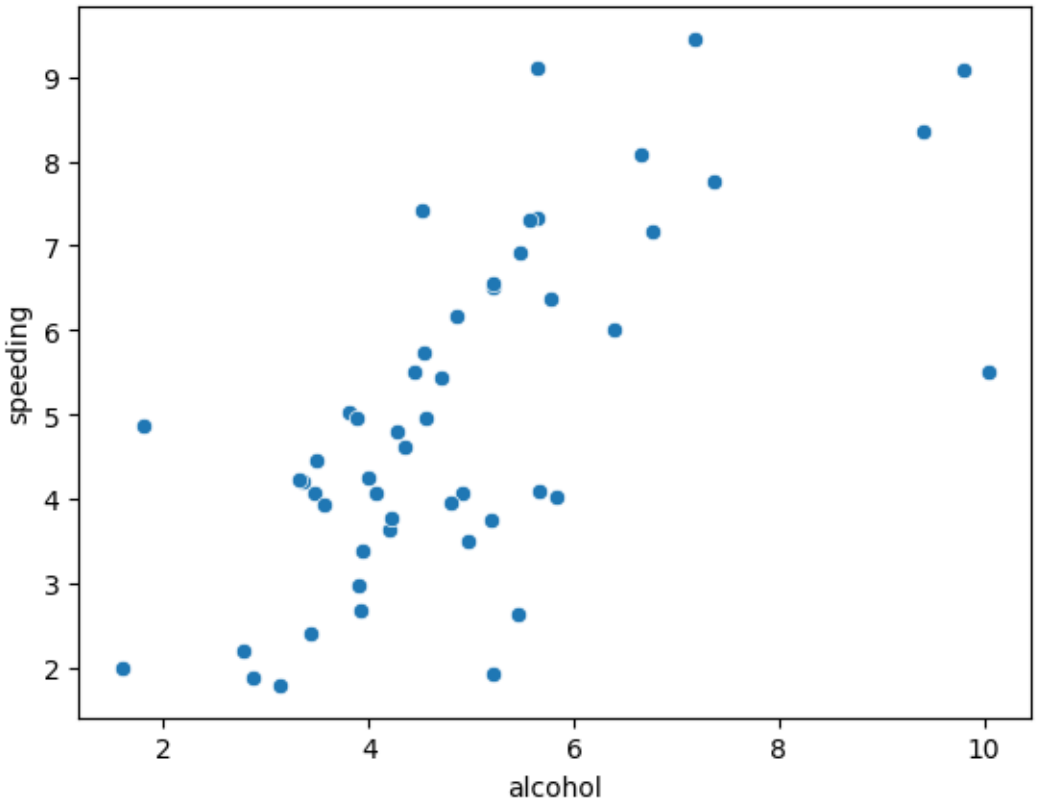
[6]:
```
sns.scatterplot(x="total",y="speeding",data=data)
```

[6]: <Axes: xlabel='total', ylabel='speeding'>



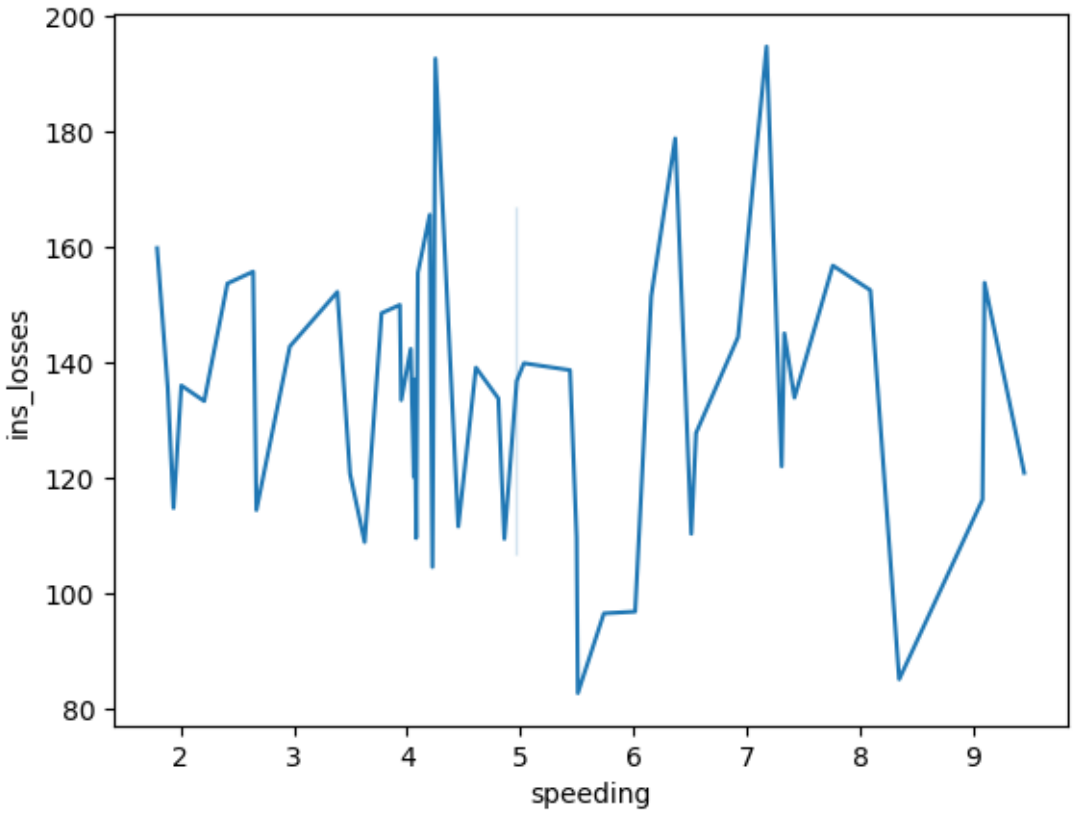
[7]:
```
sns.scatterplot(x="alcohol",y="speeding",data=data)
```

[7]: <Axes: xlabel='alcohol', ylabel='speeding'>



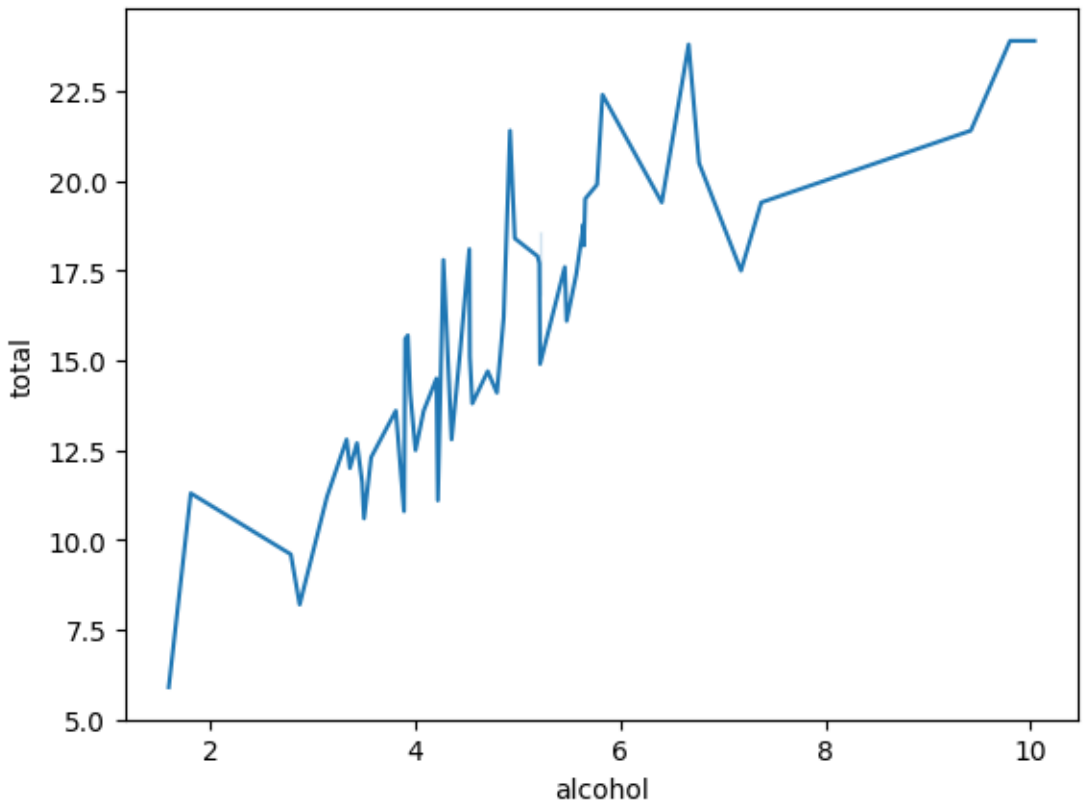
[8]:
```
sns.lineplot(x="speeding",y="ins_losses",data=data)
```

[8]:
```
<Axes: xlabel='speeding', ylabel='ins_losses'>
```



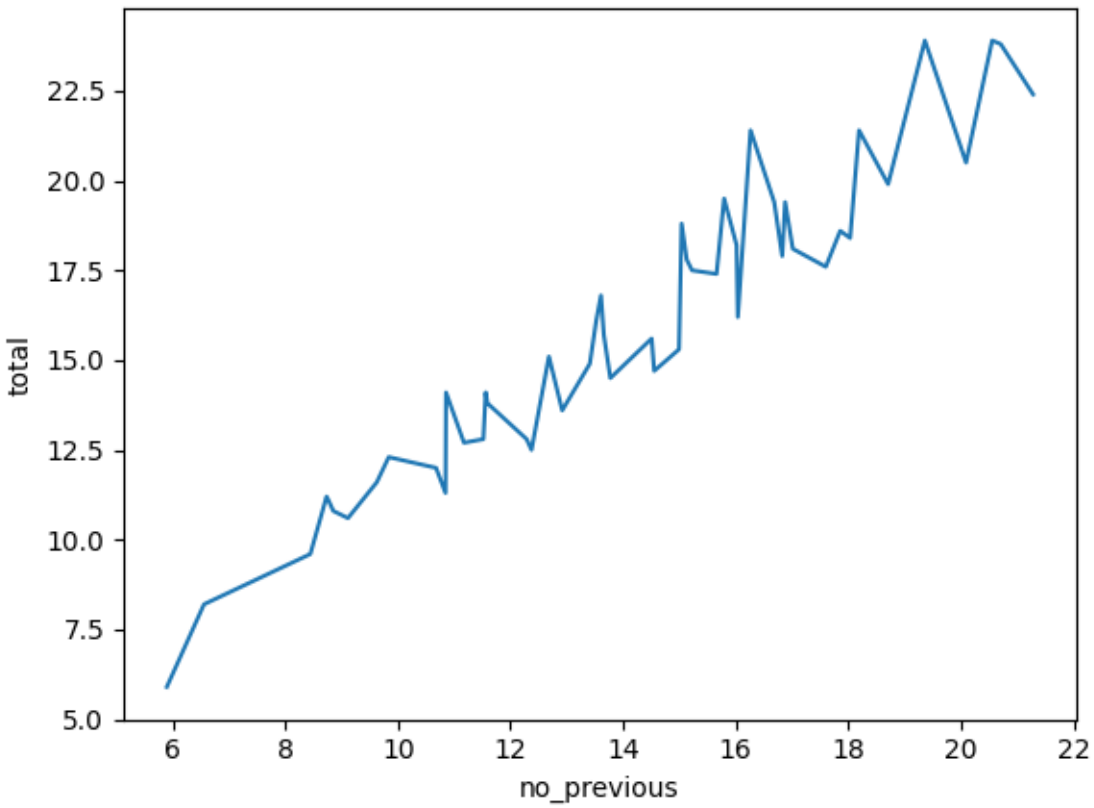
[9]:
```
sns.lineplot(x="alcohol",y="total",data=data)
```

[9]:
```
<Axes: xlabel='alcohol', ylabel='total'>
```



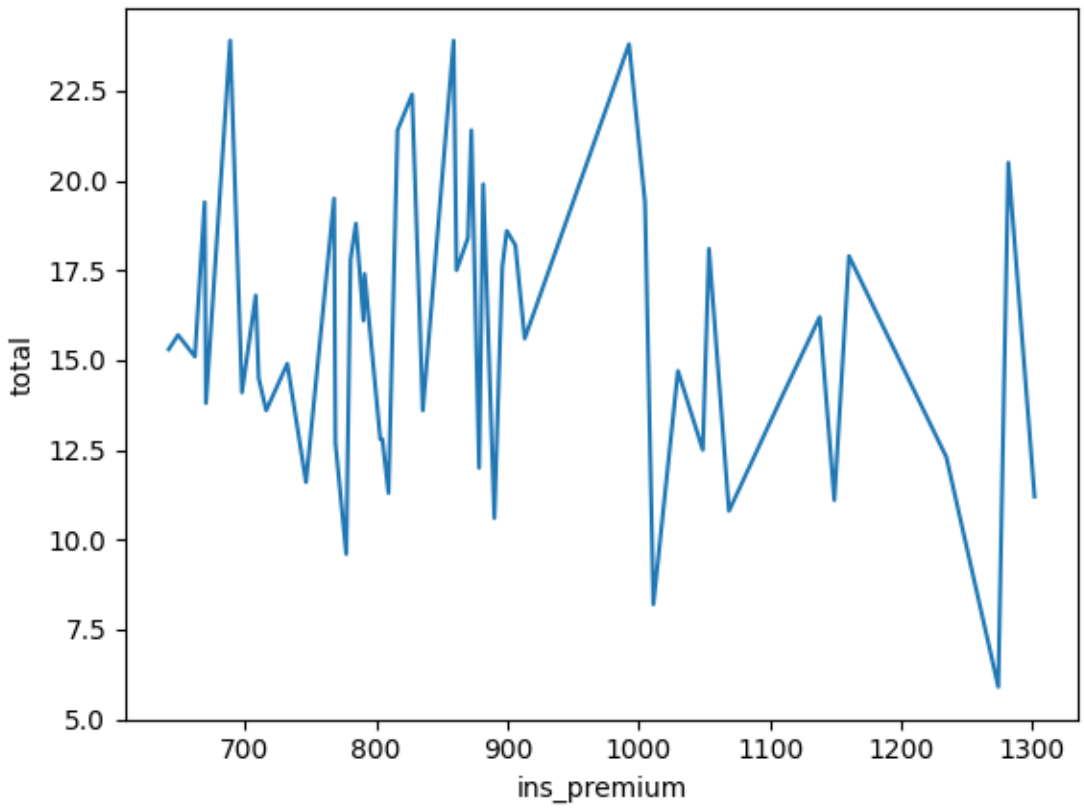
[10]:
```
sns.lineplot(x="no_previous",y="total",data=data)
```

[10]:
```
<Axes: xlabel='no_previous', ylabel='total'>
```



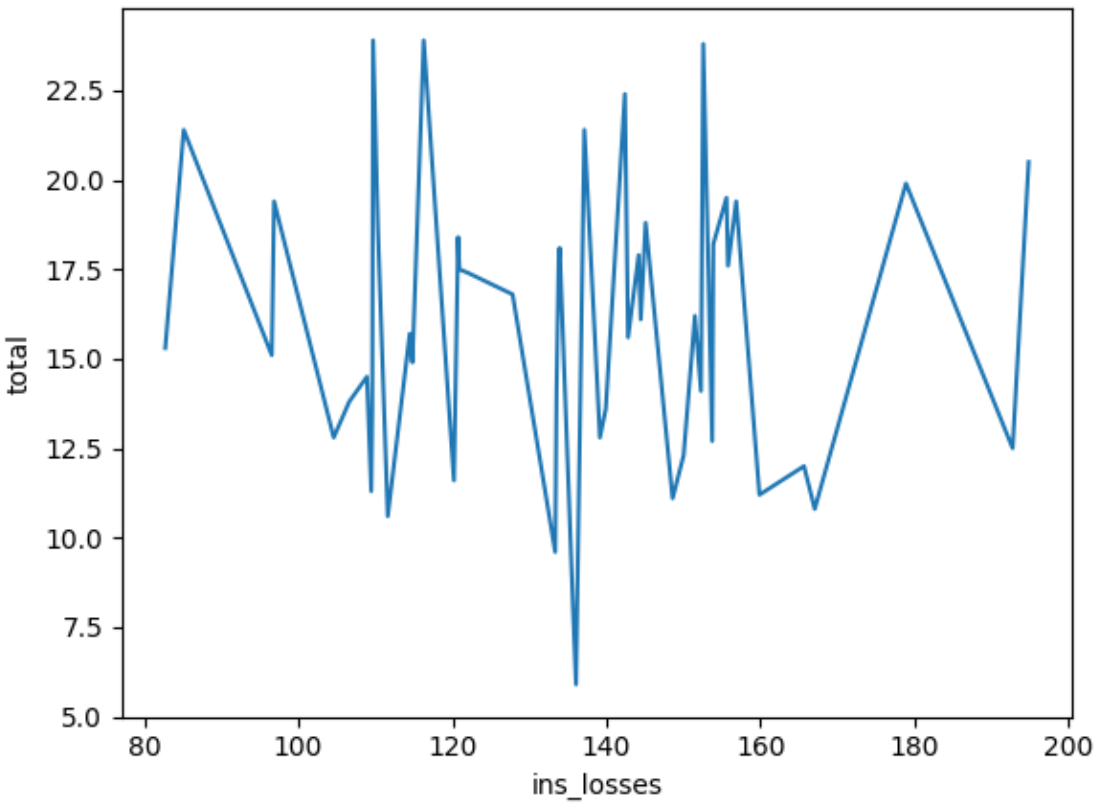
[11]:
```
sns.lineplot(x="ins_premium",y="total",data=data)
```

[11]:
```
<Axes: xlabel='ins_premium', ylabel='total'>
```



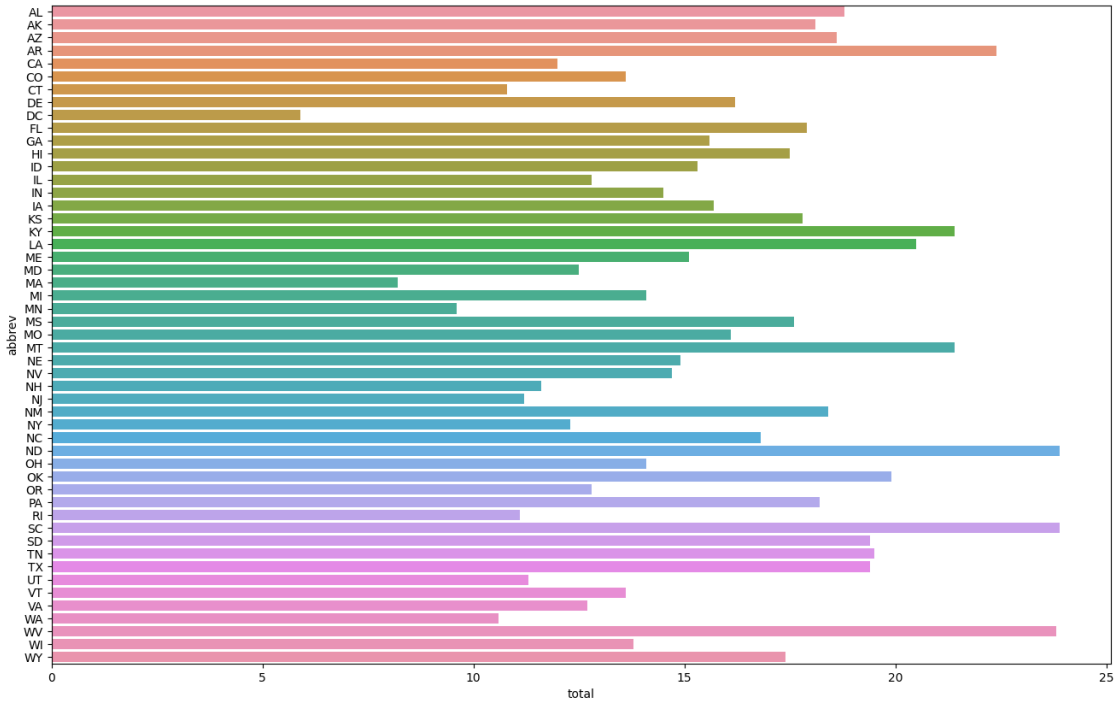
[12]:
```
sns.lineplot(x="ins_losses",y="total",data=data)
```

[12]:
```
<Axes: xlabel='ins_losses', ylabel='total'>
```



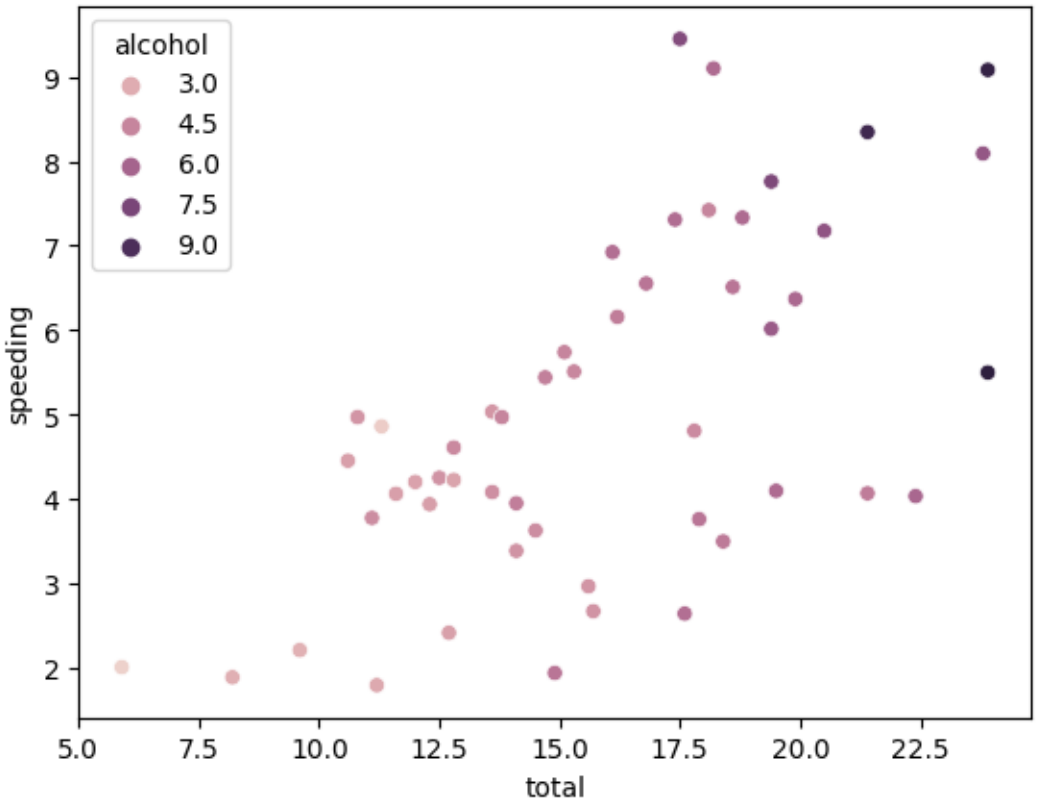
[13]:
```
plt.subplots(figsize=(16,10))
sns.barplot(data=data,x="total",y="abbrev")
```

[13]:
```
<Axes: xlabel='total', ylabel='abbrev'>
```



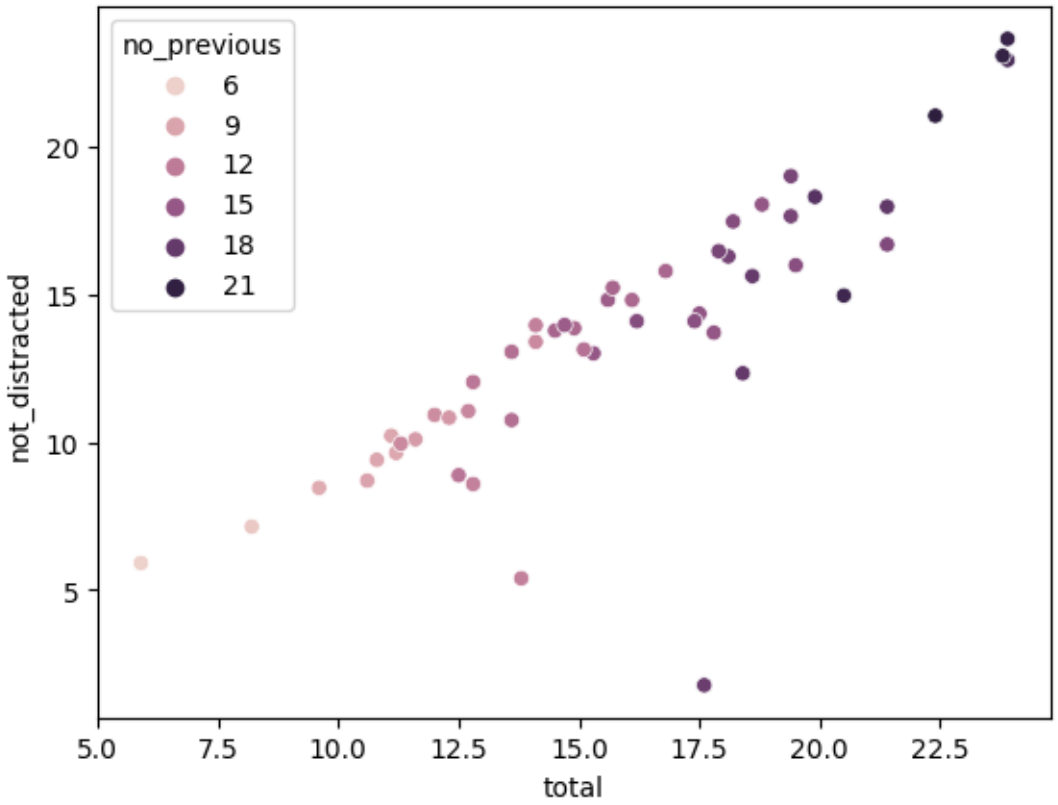
[15]:
```
sns.scatterplot(x="total",y="speeding",data=data,hue="alcohol")
```

[15]: <Axes: xlabel='total', ylabel='speeding'>



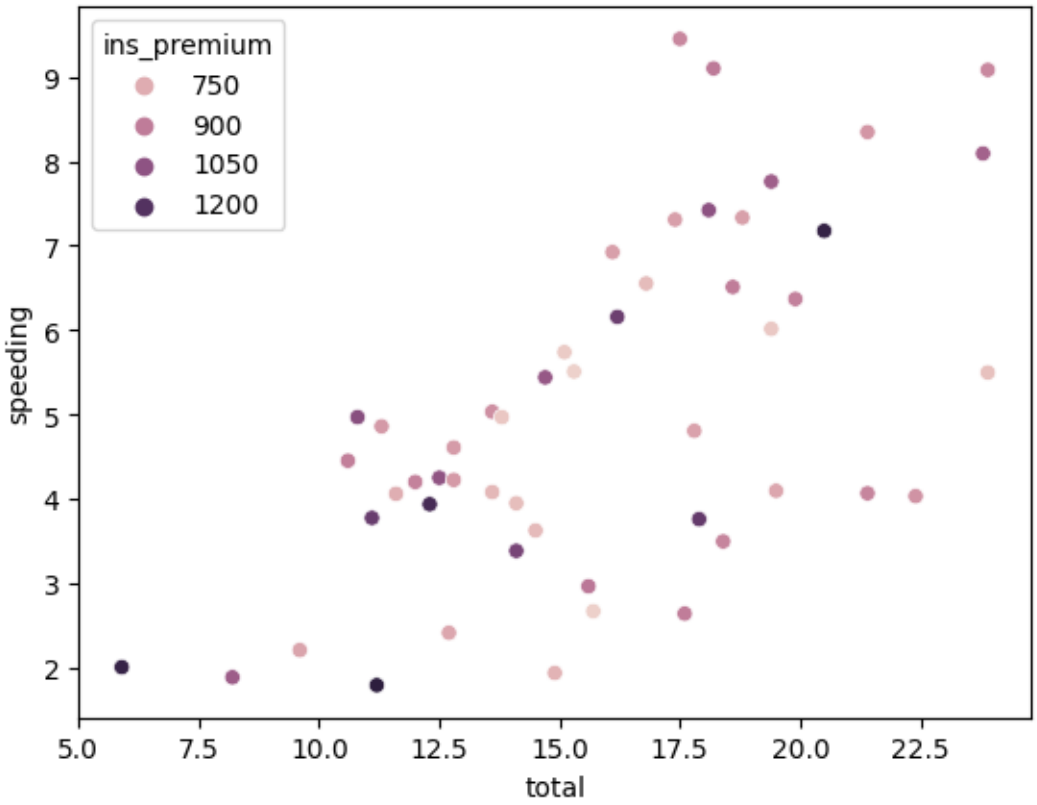
[16]:
```
sns.scatterplot(x="total",y="not_distracted",data=data,hue="no_previous")
```

[16]:
```
<Axes: xlabel='total', ylabel='not_distracted'>
```



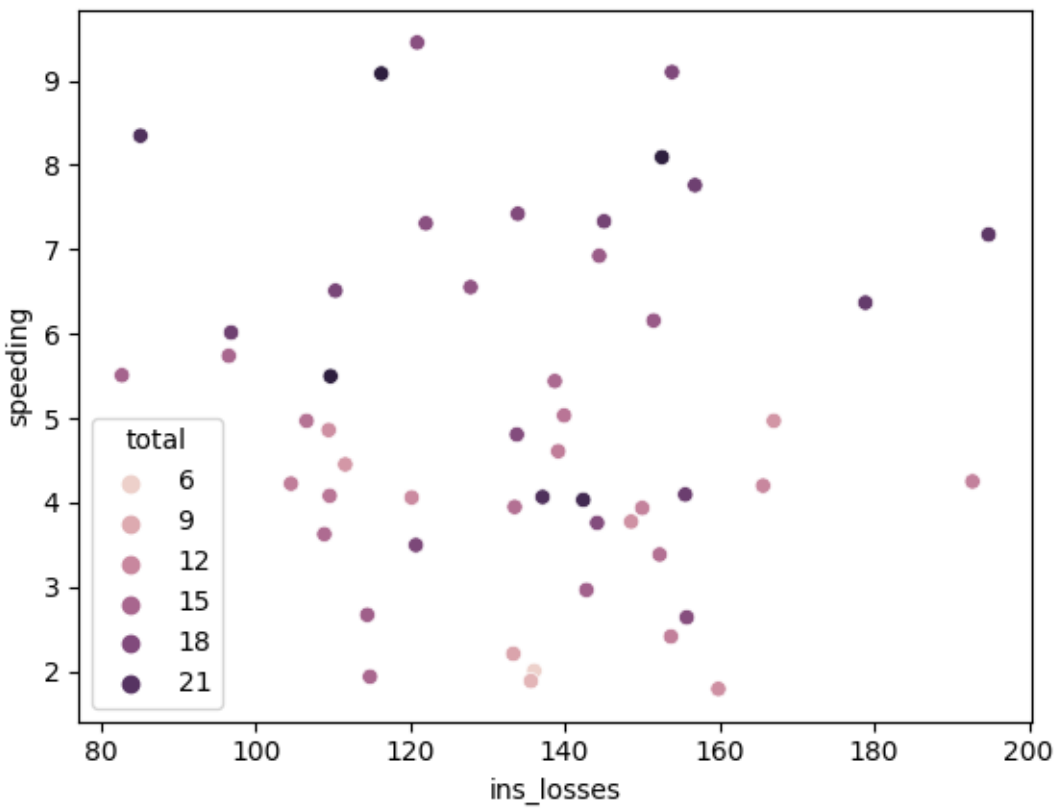
[17]:
```
sns.scatterplot(x="total",y="speeding",data=data,hue="ins_premium")
```

[17]:
```
<Axes: xlabel='total', ylabel='speeding'>
```



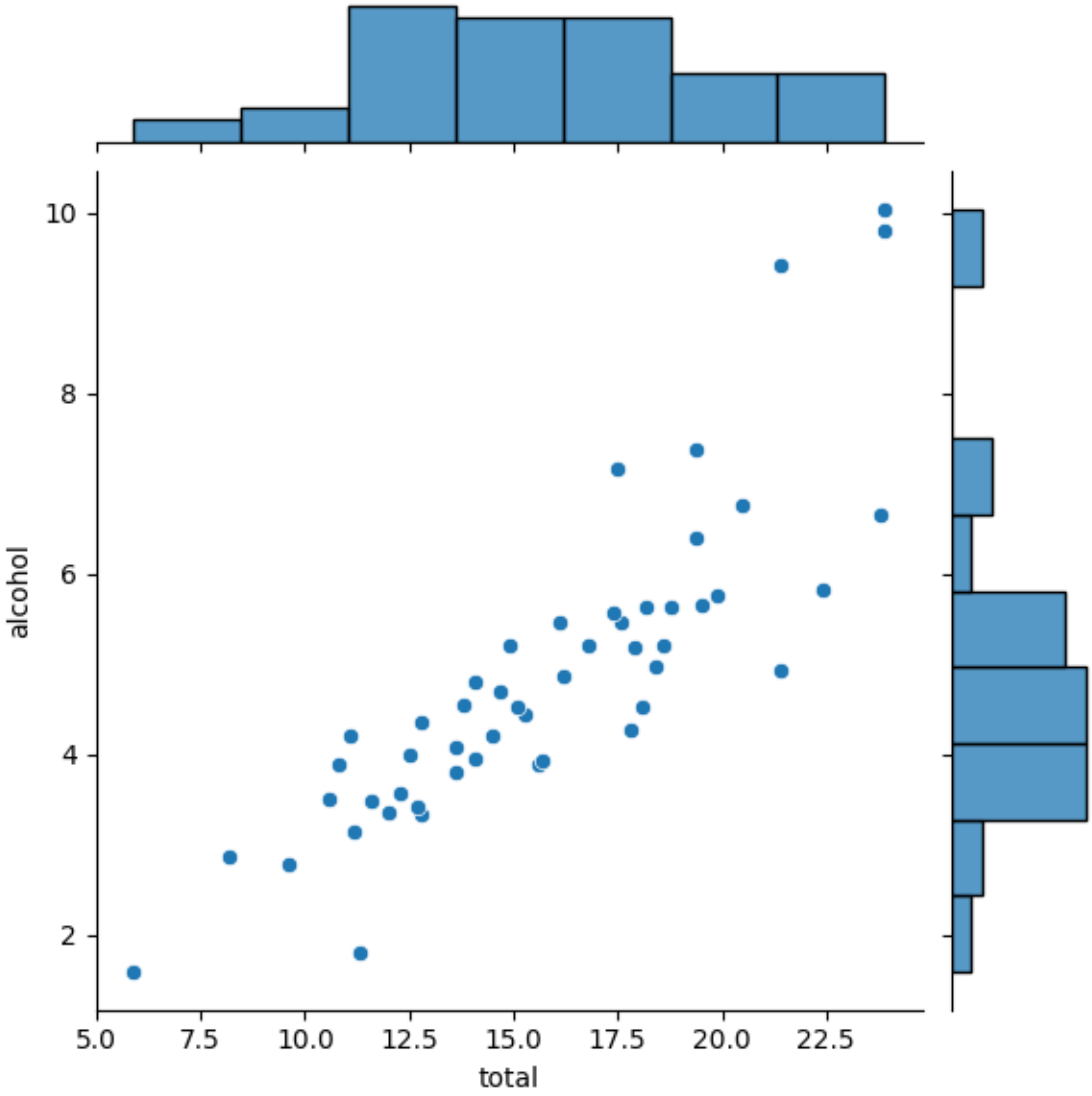
[18]:
```
sns.scatterplot(x="ins_losses",y="speeding",data=data,hue="total")
```

[18]:
```
<Axes: xlabel='ins_losses', ylabel='speeding'>
```



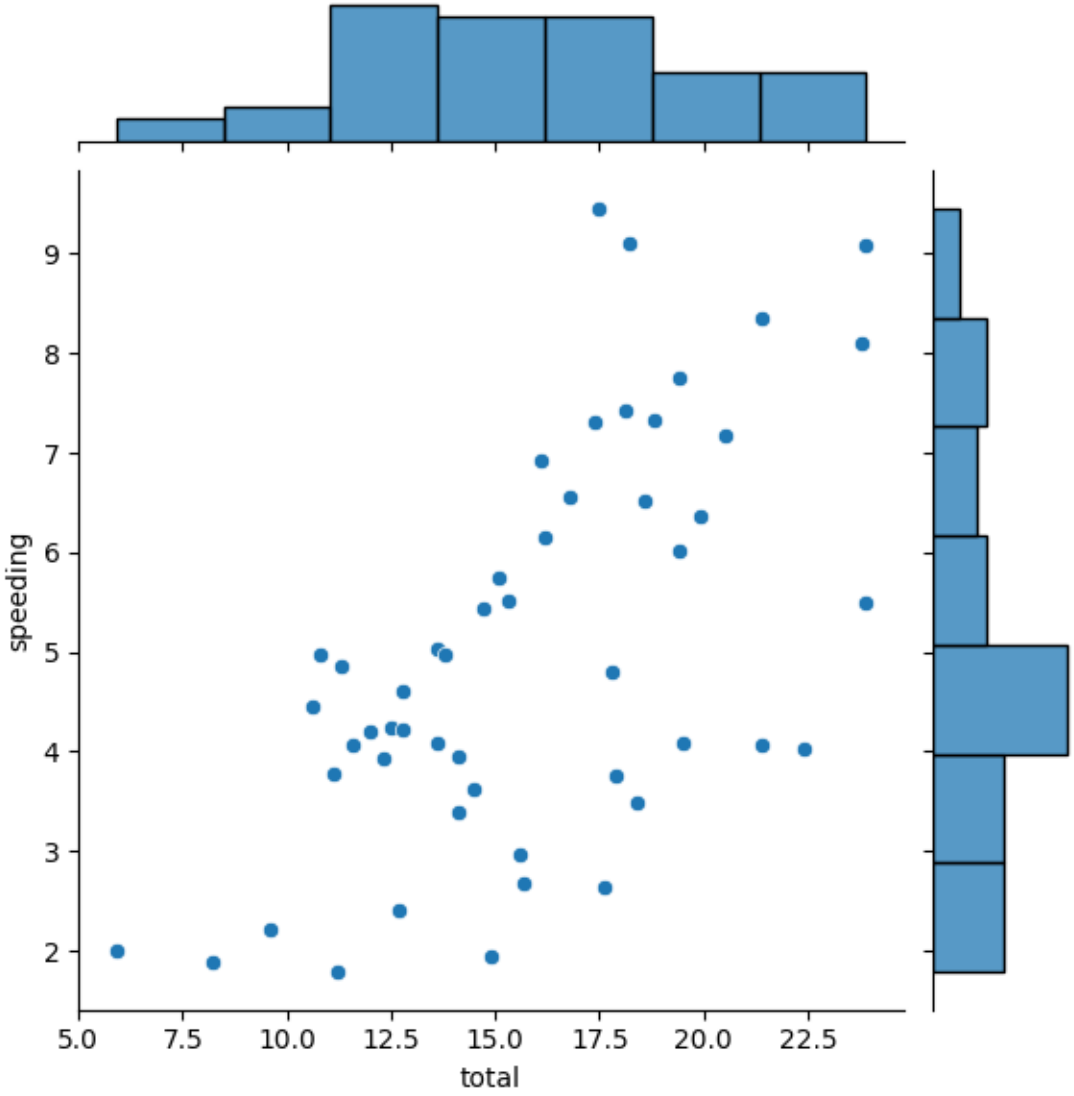
[19]:
```
sns.jointplot(x="total",y="alcohol",data=data)
```

[19]: <seaborn.axisgrid.JointGrid at 0x7a5c2696f730>



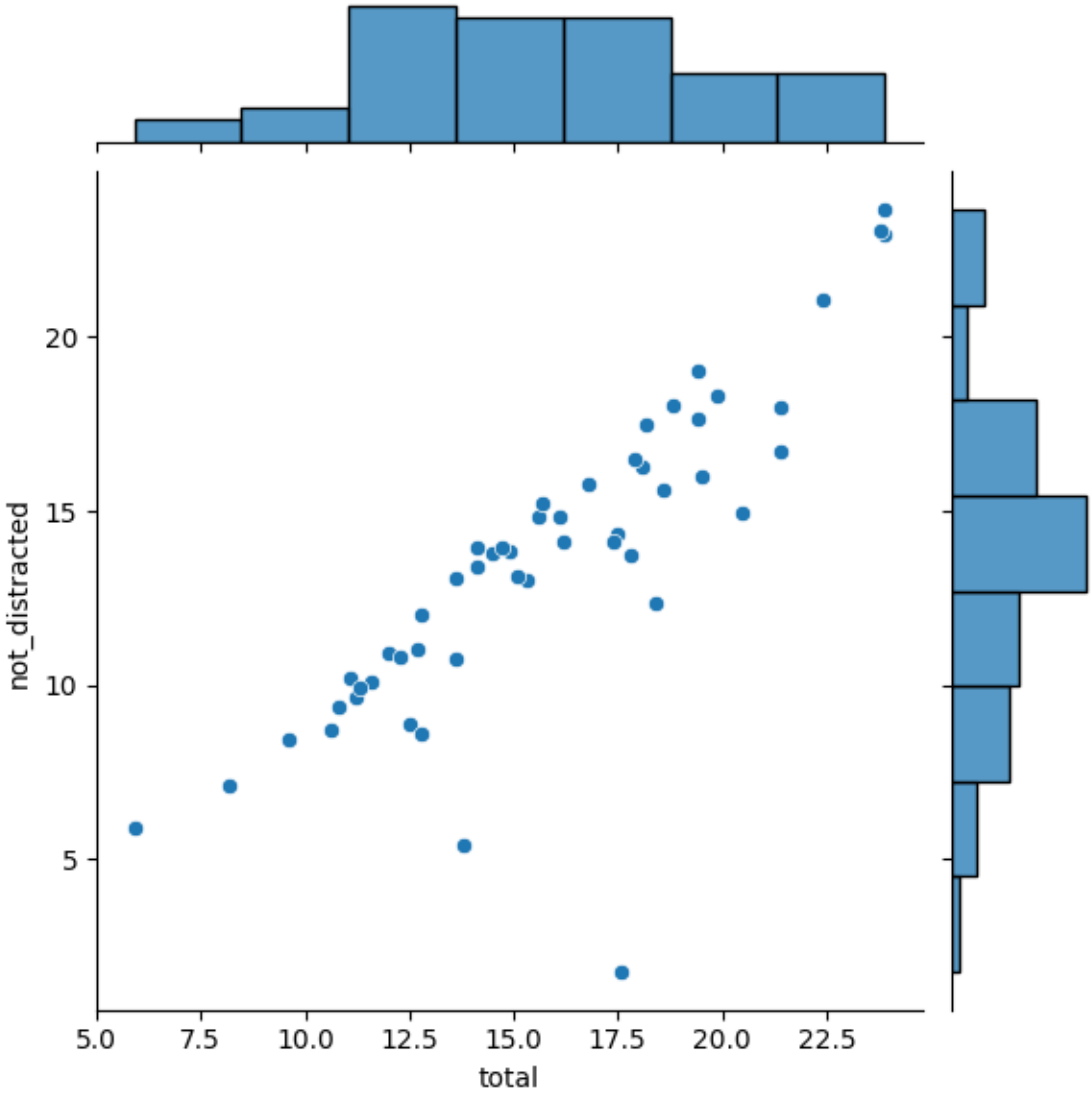
[20]:
```
sns.jointplot(x="total",y="speeding",data=data)
```

[20]:
```
<seaborn.axisgrid.JointGrid at 0x7a5c271058d0>
```



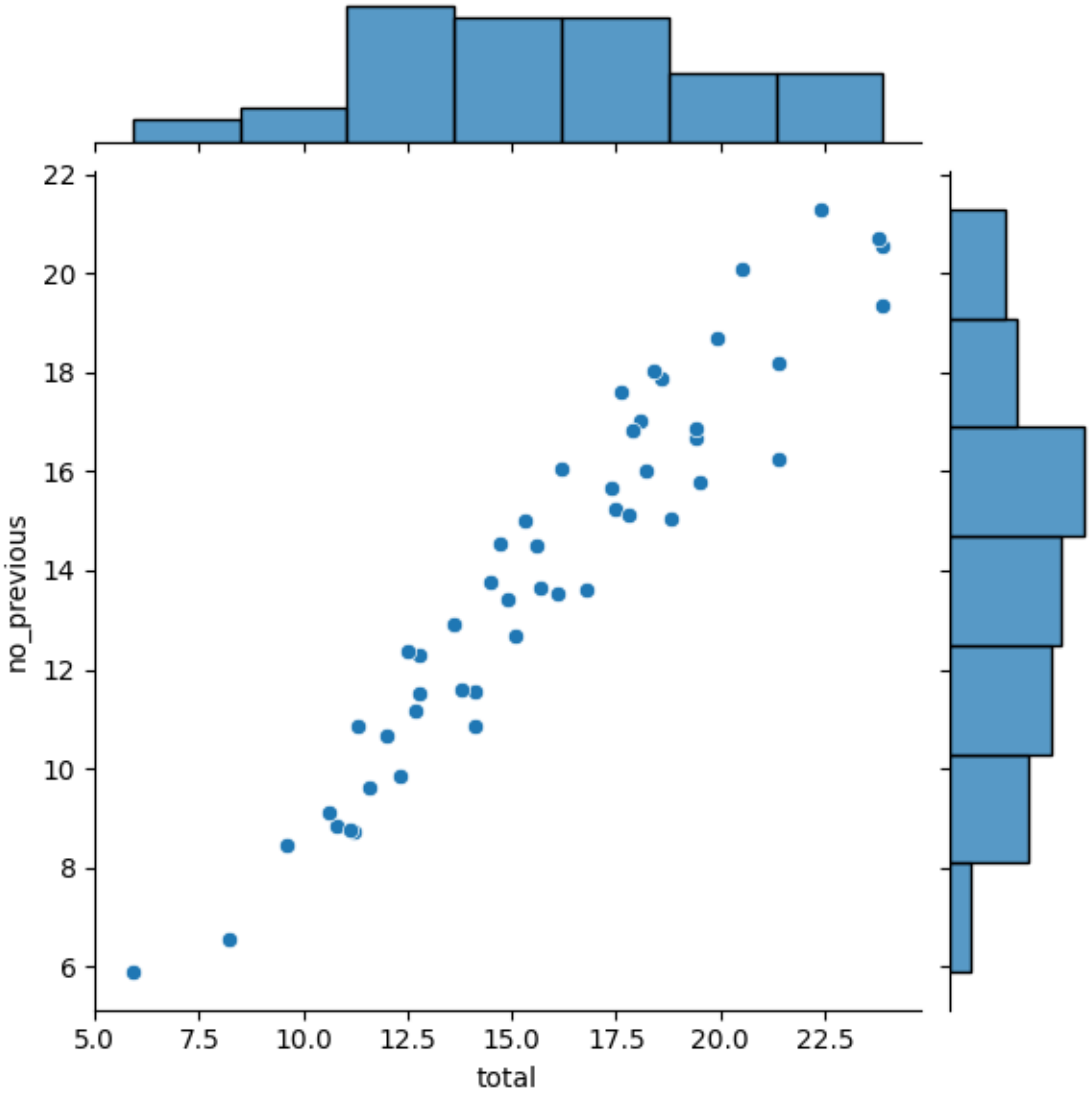
[21]:
```
sns.jointplot(x="total",y="not_distracted",data=data)
```

[21]: <seaborn.axisgrid.JointGrid at 0x7a5c26b36380>



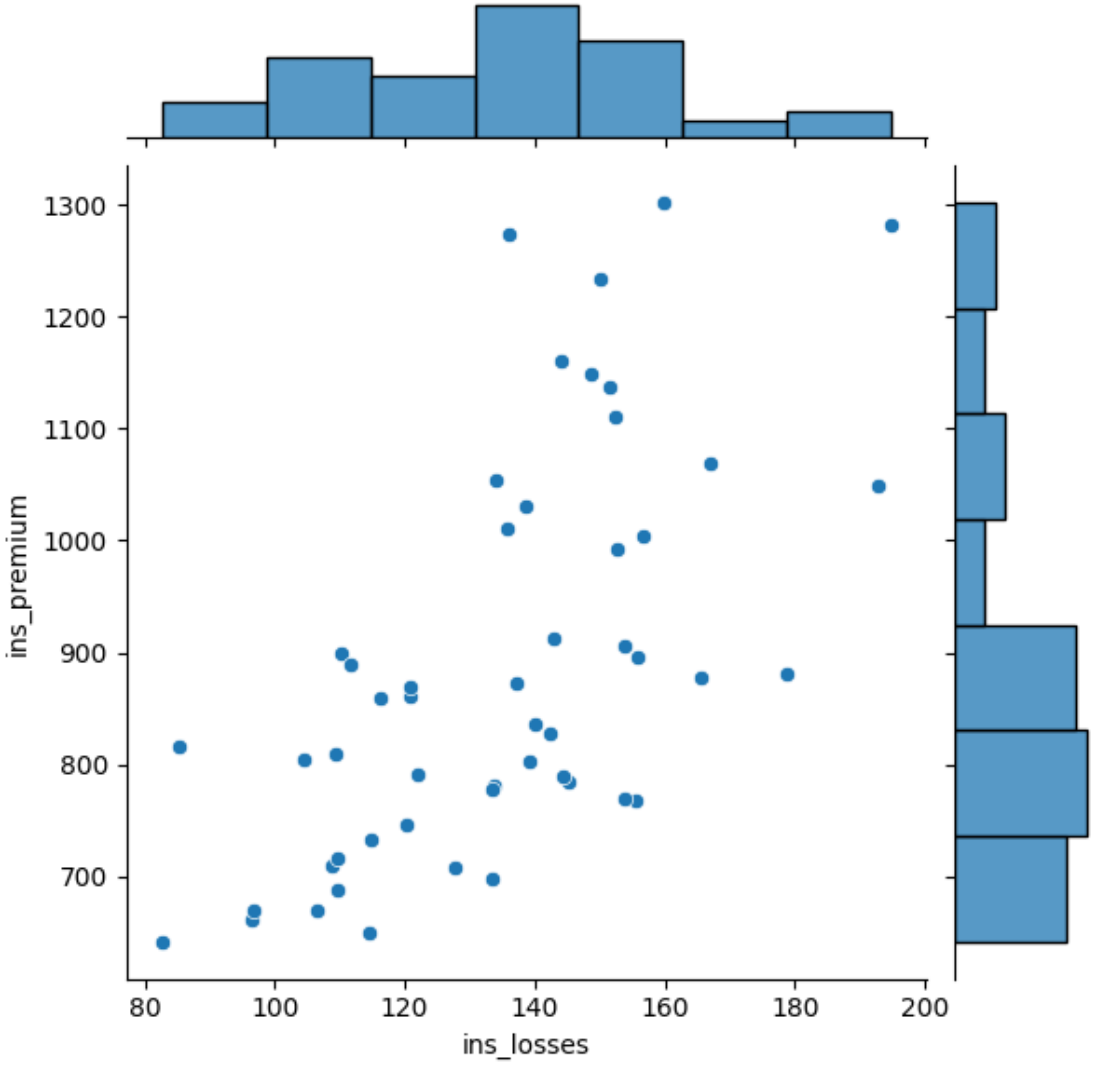
[22]:
```
sns.jointplot(x="total",y="no_previous",data=data)
```

[22]: <seaborn.axisgrid.JointGrid at 0x7a5c26a6cb50>



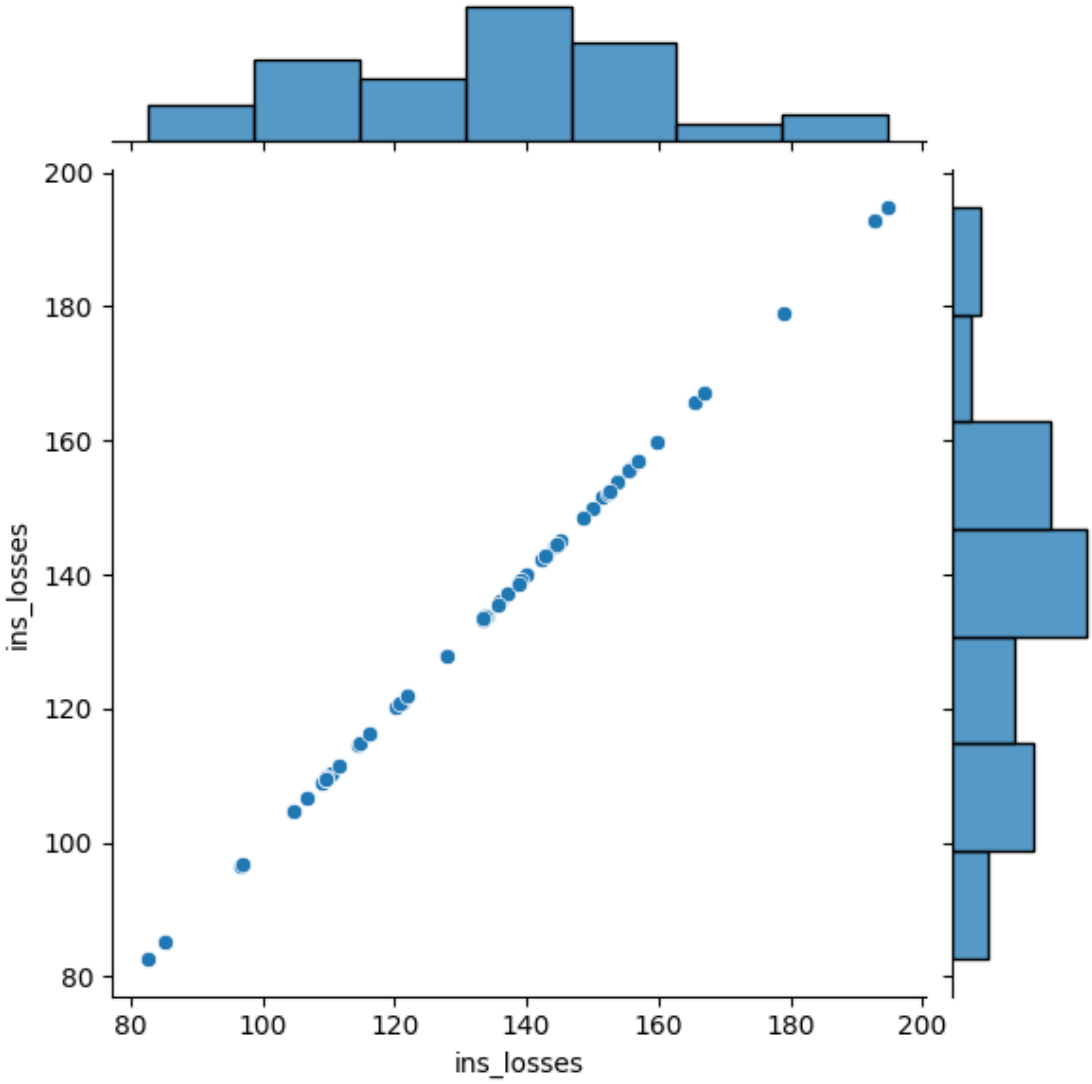
[23]:
```
sns.jointplot(x="ins_losses",y="ins_premium",data=data)
```

[23]:
```
<seaborn.axisgrid.JointGrid at 0x7a5c26e8b1c0>
```



[24]:
```
sns.jointplot(x="ins_losses",y="ins_losses",data=data)
```

[24]: <seaborn.axisgrid.JointGrid at 0x7a5c26a440d0>

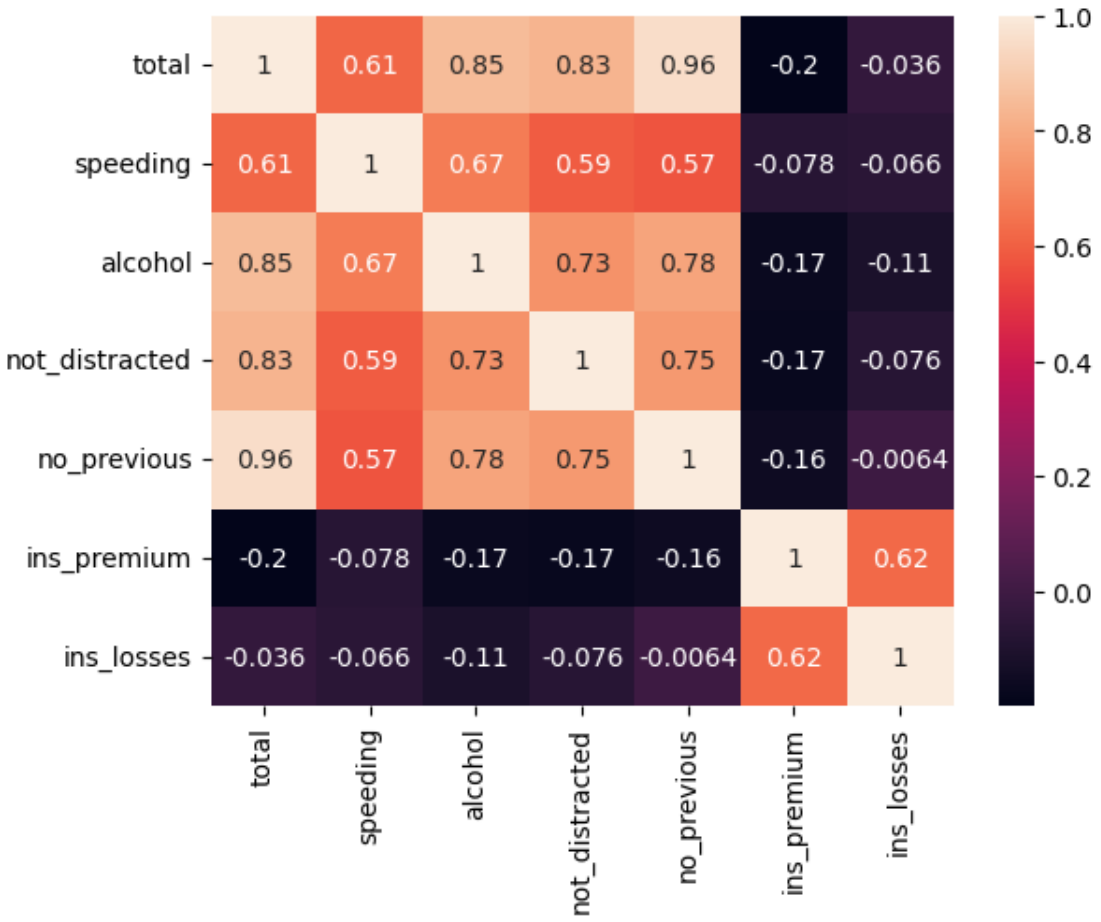


[25]:
```
corr = data.corr()
```

```
<ipython-input-25-17182710d970>:1: FutureWarning: The default value of
numeric_only in DataFrame.corr is deprecated. In a future version, it will
default to False. Select only valid columns or specify the value of numeric_only
to silence this warning.
  corr = data.corr()
```

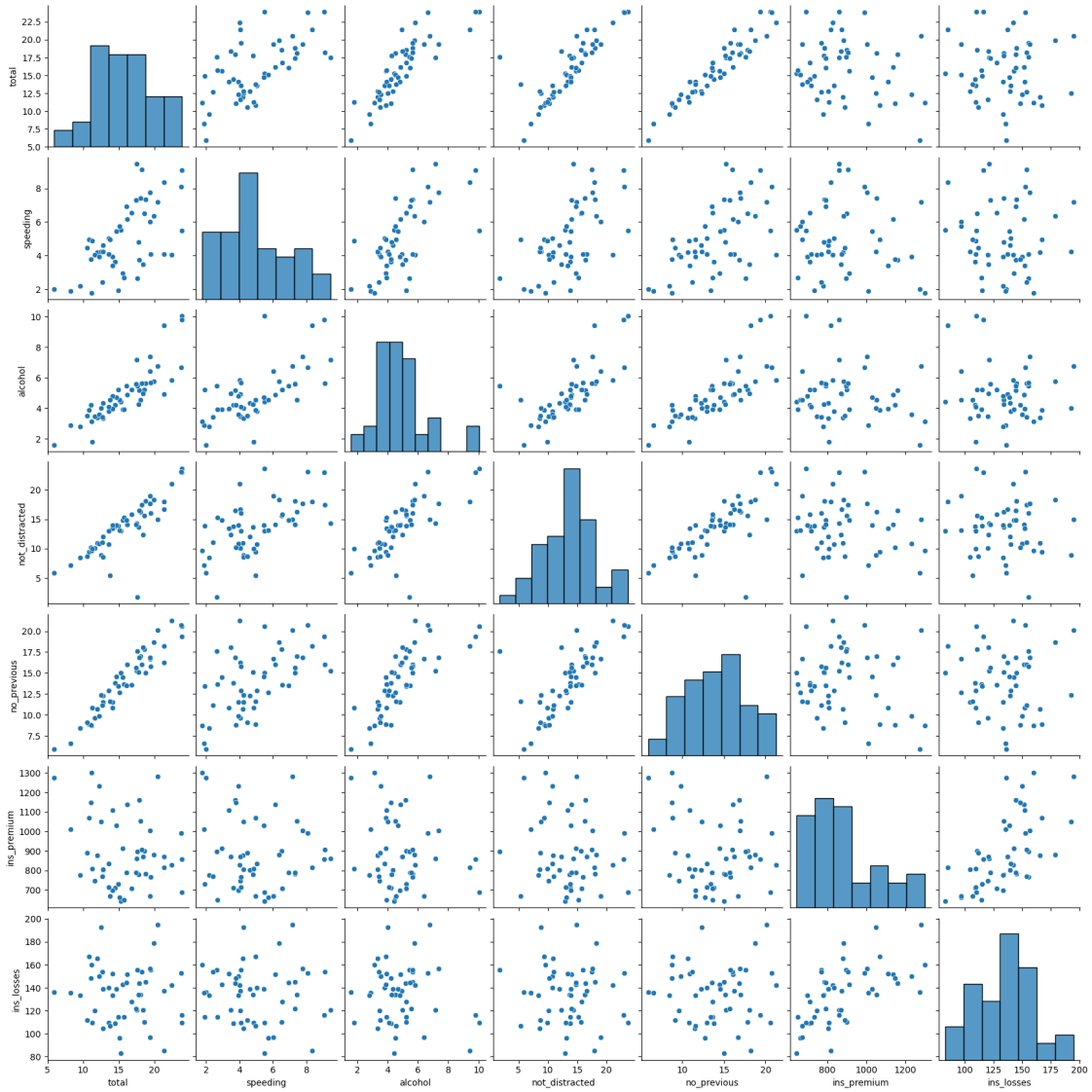
[26]:
```
sns.heatmap(corr,annot=True)
```

[26]: <Axes: >



[27]:
```
sns.pairplot(data)
```

[27]: <seaborn.axisgrid.PairGrid at 0x7a5c26083d30>


total
speeding
alcohol
not_distracted
no_previous
ins_premium
ins_losses