Assignment-2

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In [16]:
```
import numpy as np import
pandas as pd import seaborn as
sns import matplotlib.pyplot
as plt
```

In [17]:
```
data = pd.read_csv(rC:\Users\karth\Downloads\car_crashes.csv")
data.head()
```

Out[17]:

	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

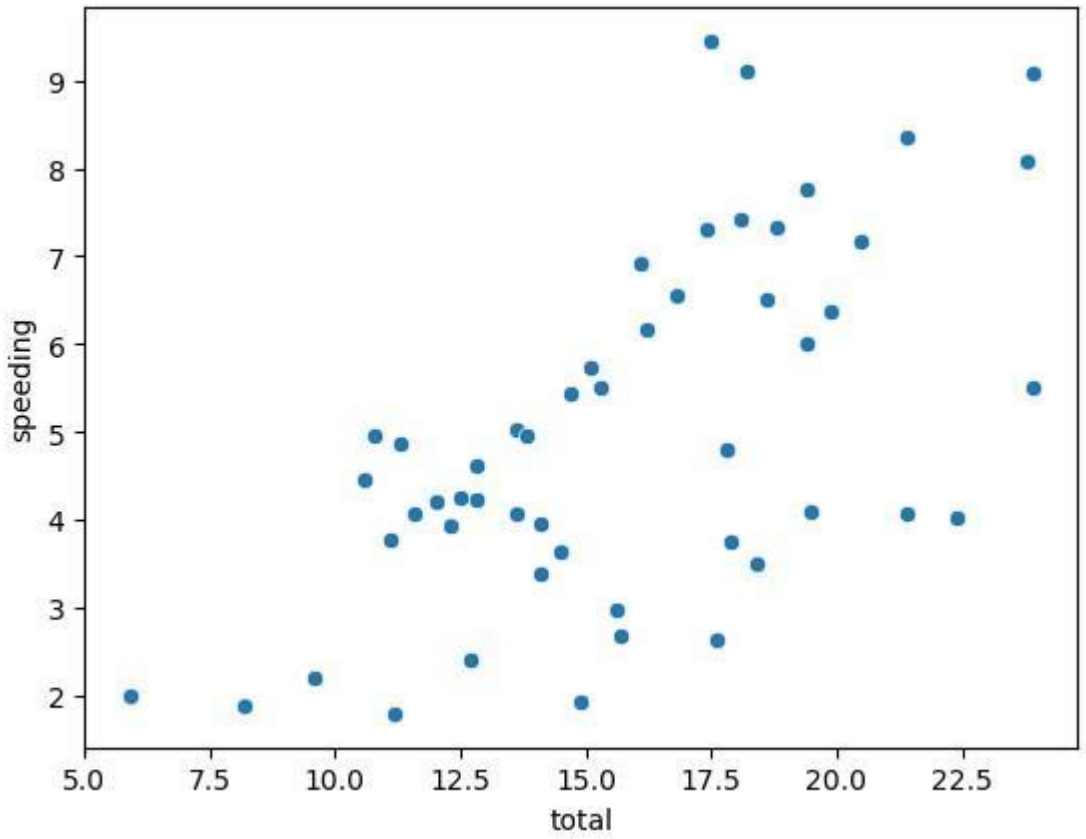
In [18]:
```
data.tail()
```

Out[18]:

	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

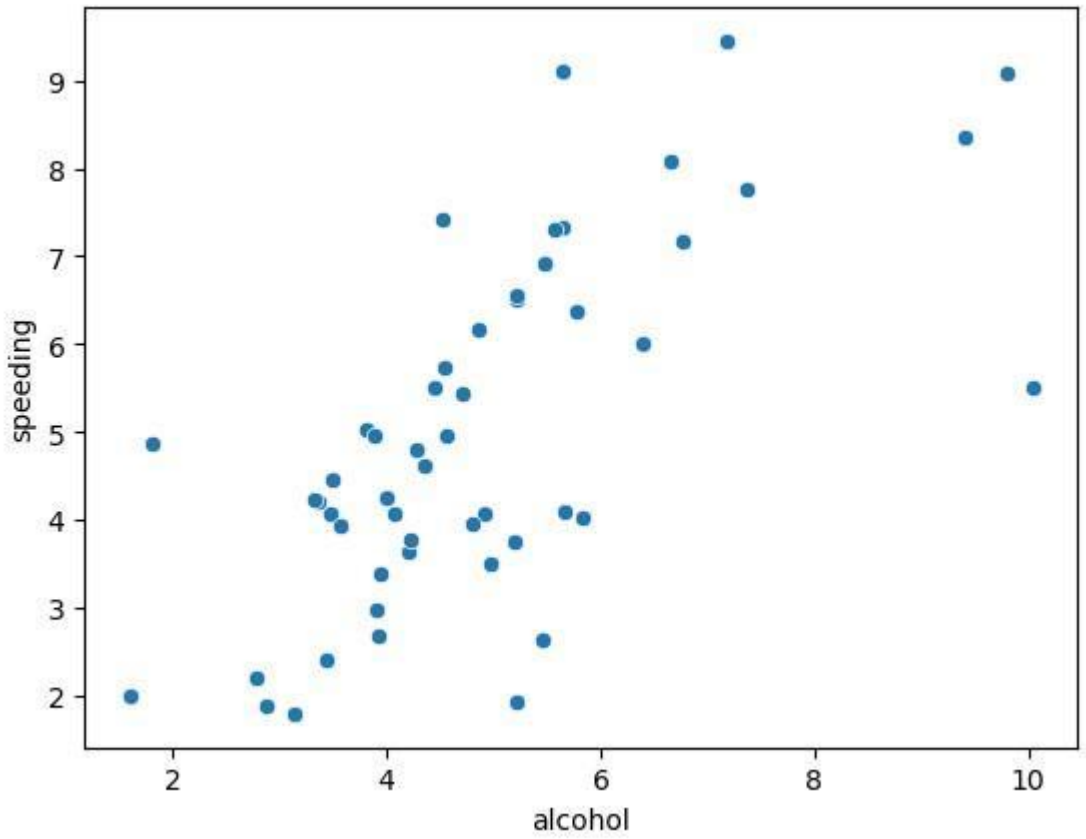
In [19]:
```
sns.scatterplot(x="total",y="speeding",data=data)
```

Out[19]:
```
<Axes:    xlabel='total',    ylabel='speeding'>
```



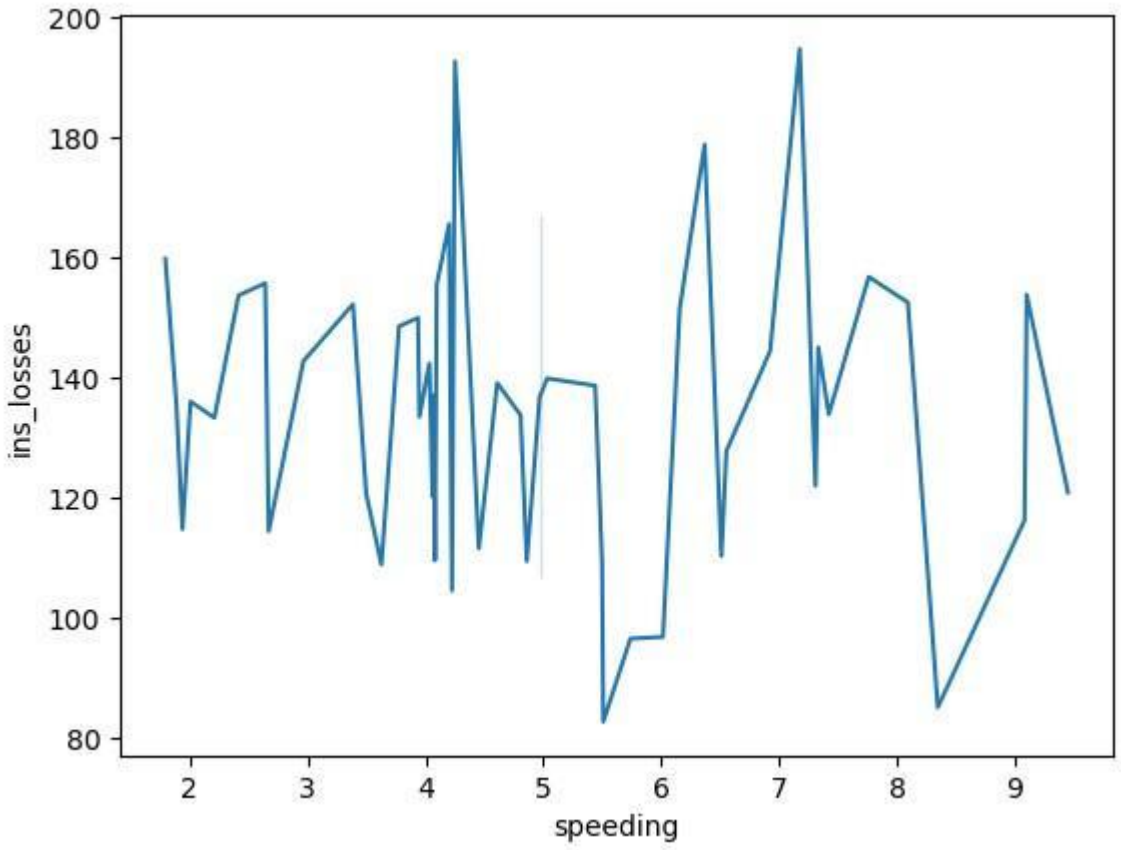
In [20]:
```
sns.scatterplot(x="alcohol",y="speeding",data=data)
```

Out[20]:
```
<Axes:  xlabel='alcohol',  ylabel='speeding'>
```



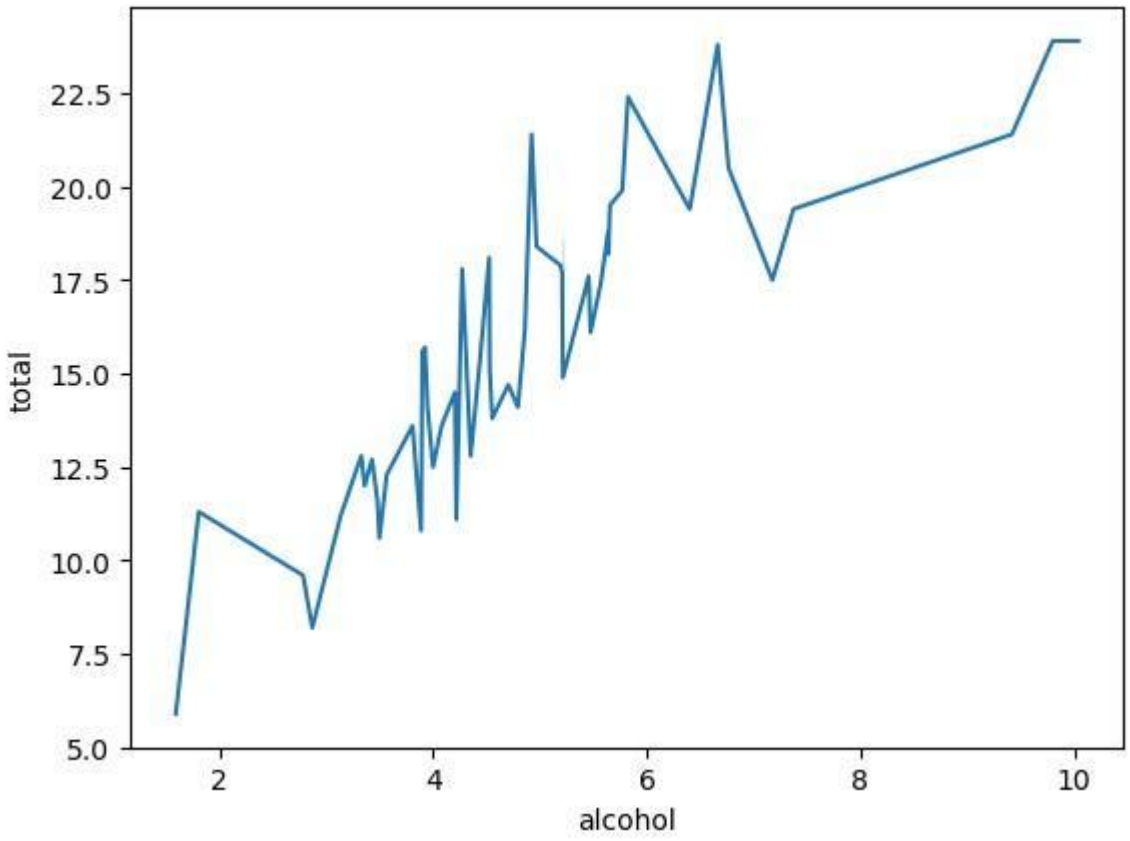
In [21]:
```
sns.lineplot(x="speeding",y="ins_losses",data=data)
```

Out[21]: <Axes: xlabel='speeding', ylabel='ins_losses'>



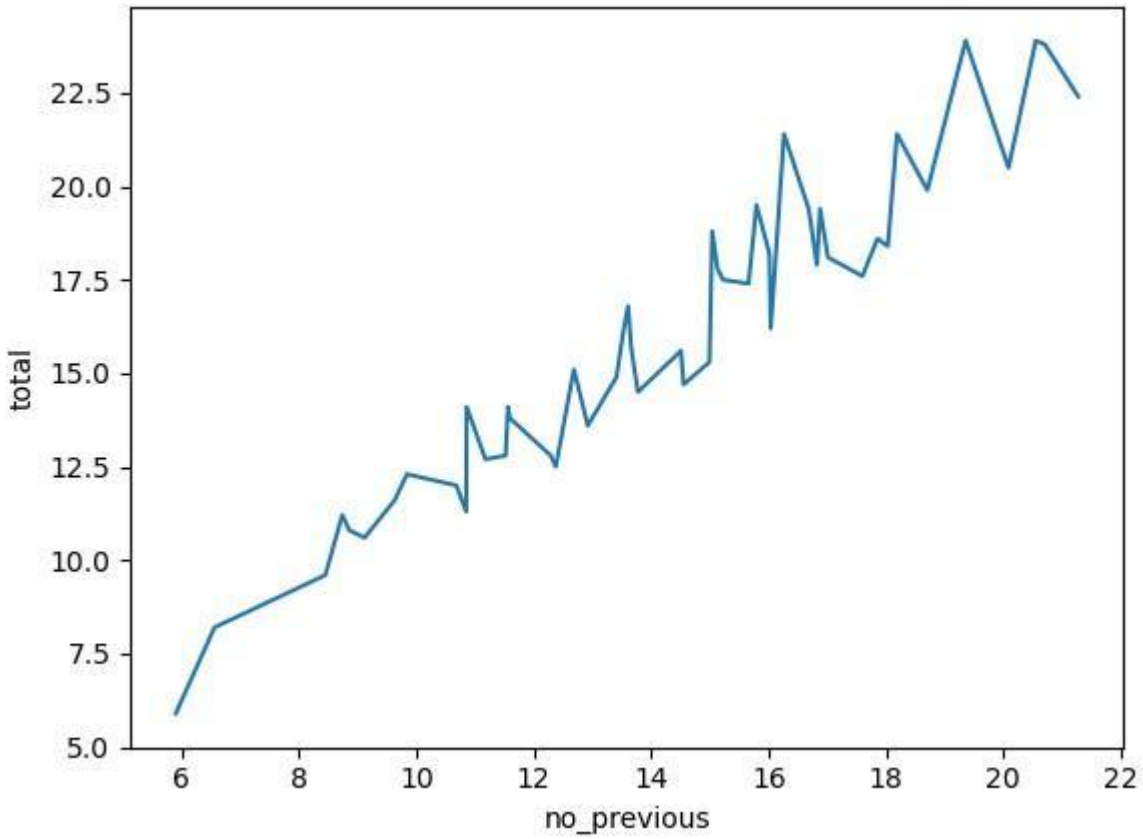
In [22]:
```
sns.lineplot(x="alcohol",y="total",data=data)
```

Out[22]: <Axes: xlabel='alcohol', ylabel='total'>



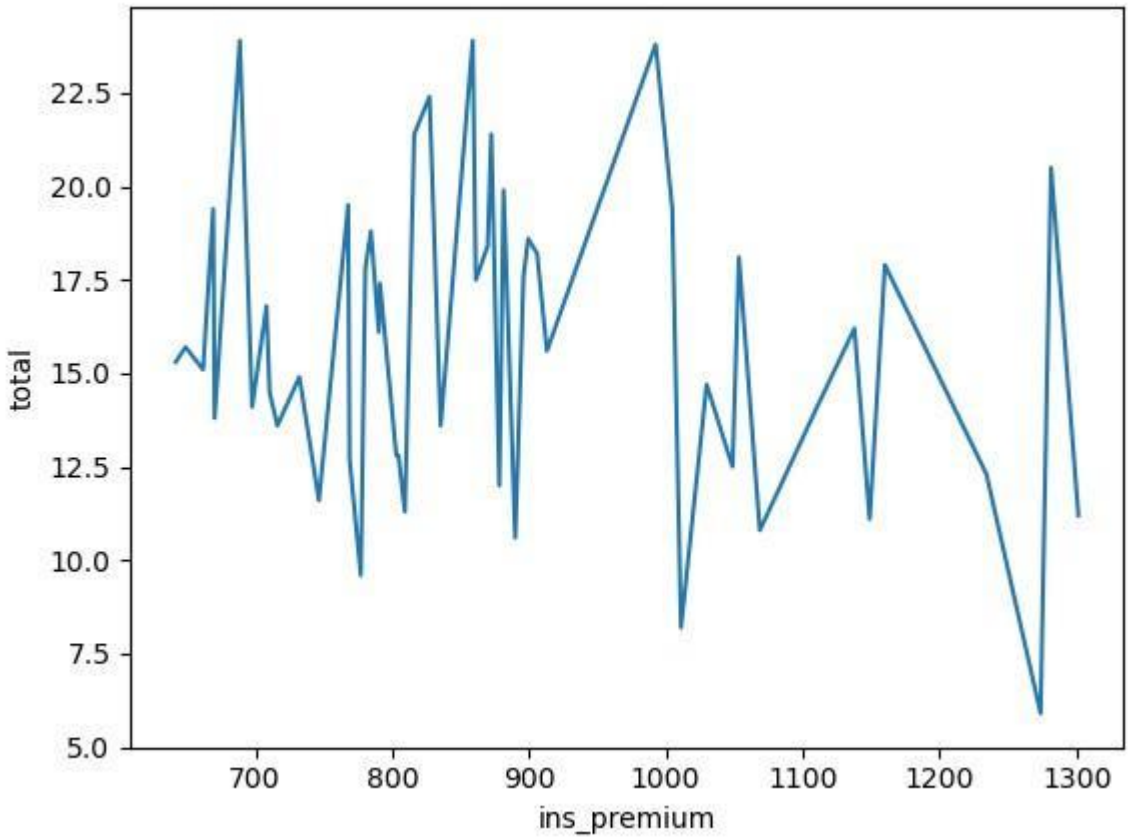
In [23]:
```
sns.lineplot(x="no_previous",y="total",data=data)
```

Out[23]:
```
<Axes:  xlabel='no_previous',  ylabel='total'>
```



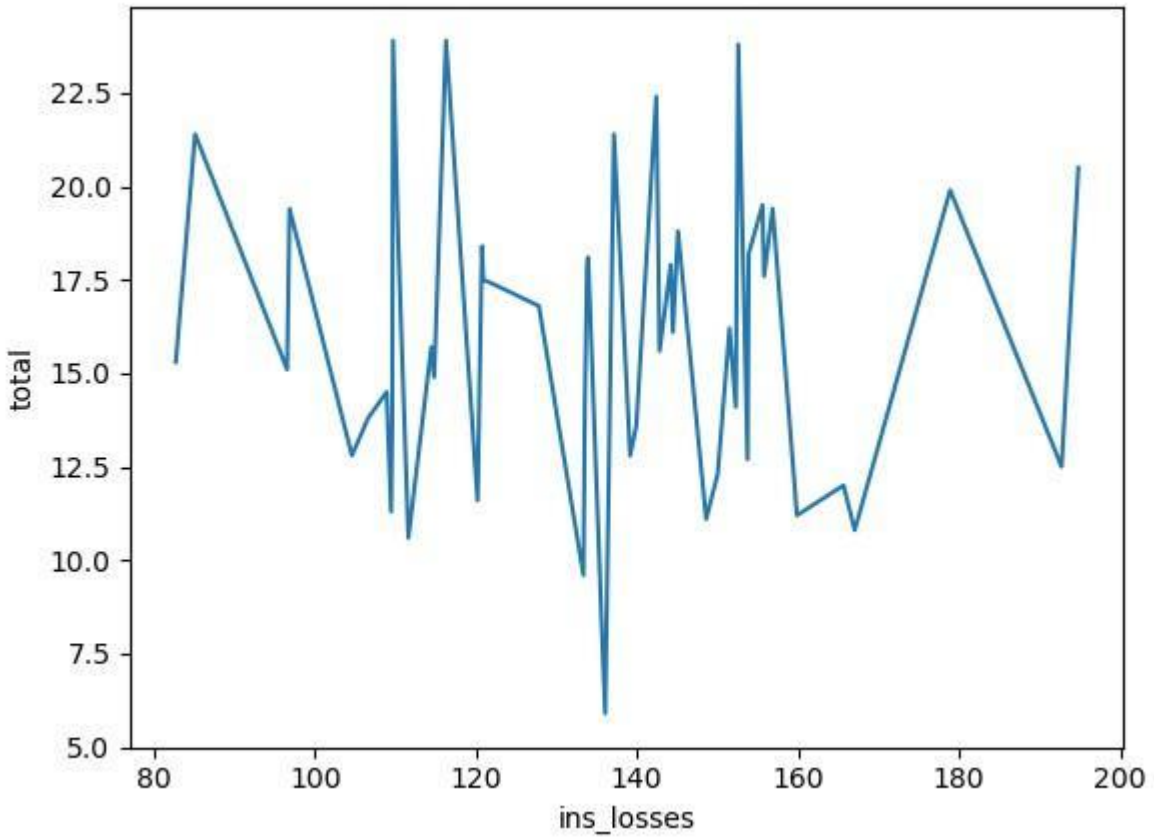
In [24]:
```
sns.lineplot(x="ins_premium",y="total",data=data)
```

Out[24]: <Axes: xlabel='ins_premium', ylabel='total'>



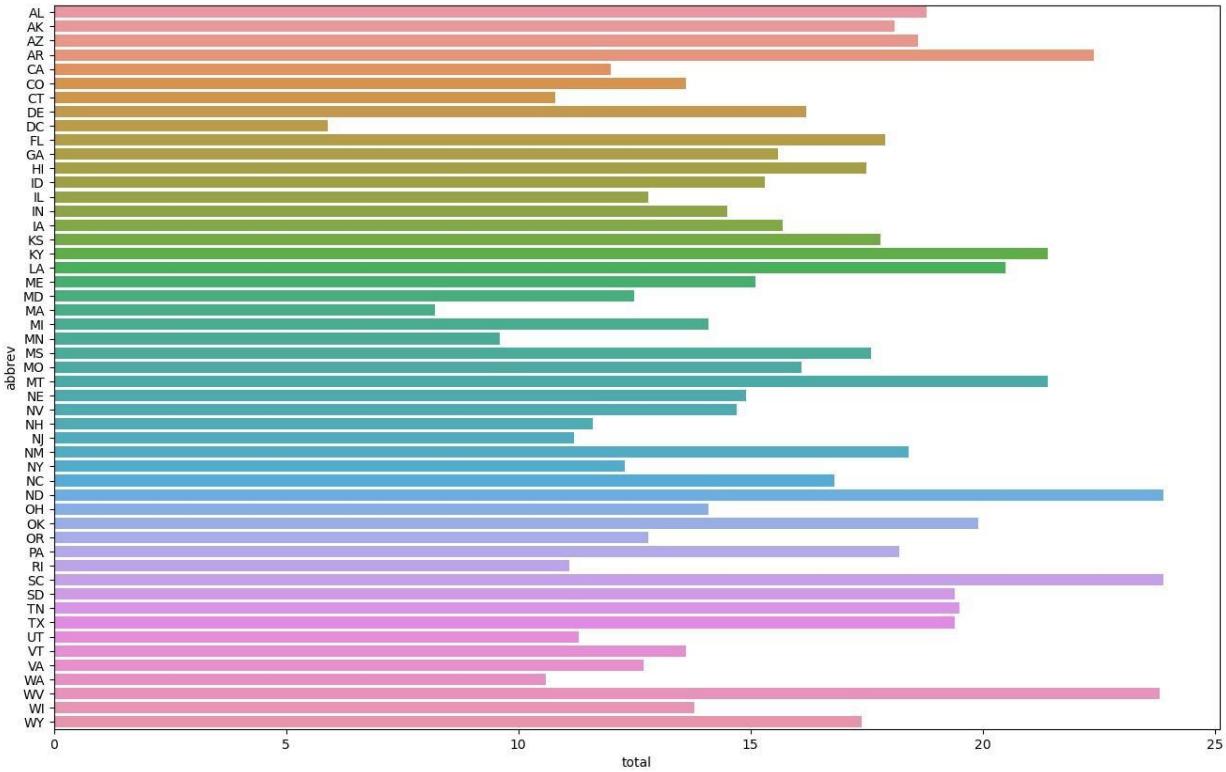
In [25]:
```
sns.lineplot(x="ins_losses",y="total",data=data)
```

Out[25]: <Axes: xlabel='ins_losses', ylabel='total'>

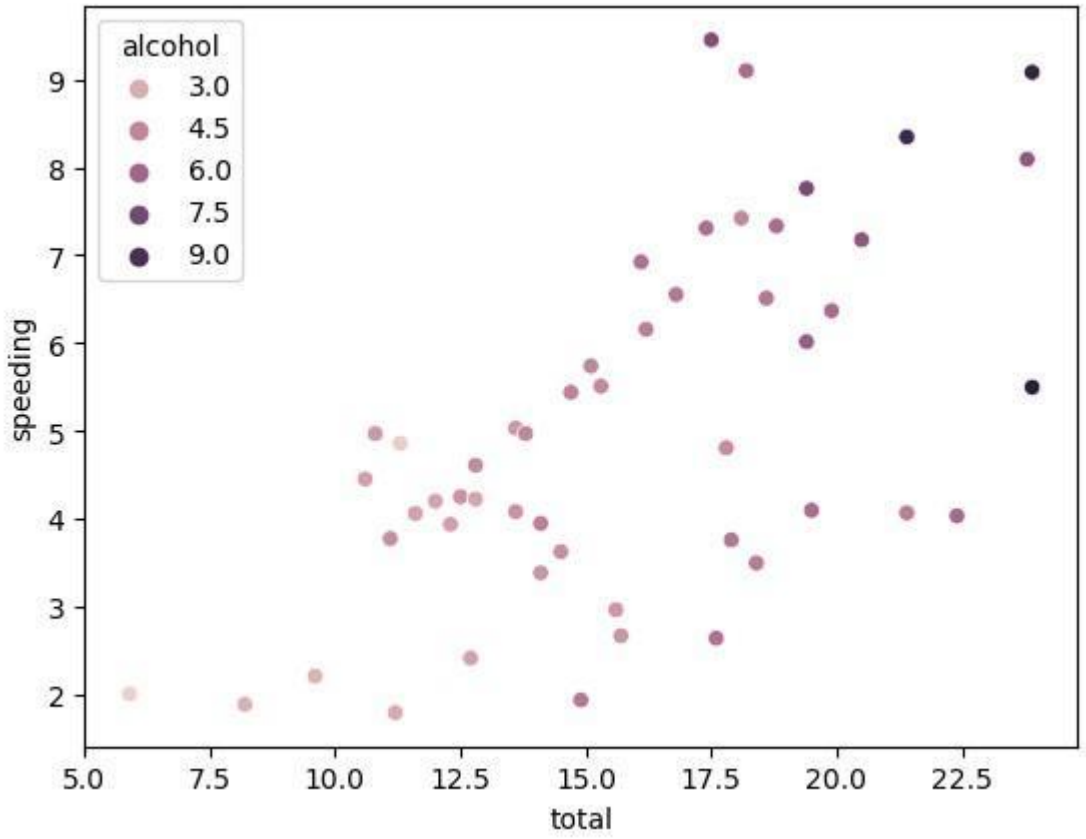



```
In [26]: plt.subplots(figsize=(16,10))
         sns.barplot(data=data,x="total",y="abbrev")
```

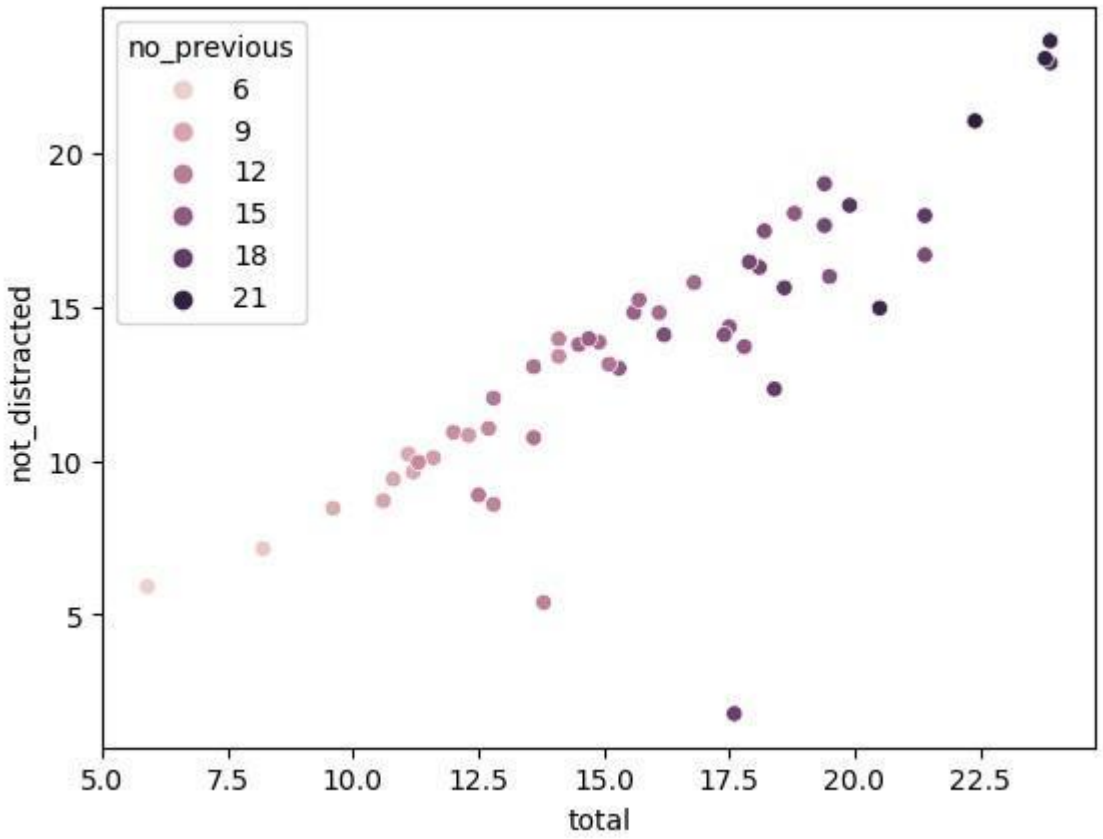
Out[26]: <Axes: xlabel='total', ylabel='abbrev'>



In [27]: sns.scatterplot(x="total",y="speeding",data=data,hue="alcohol") <Axes: xlabel='total', ylabel='speeding'> Out[27]:

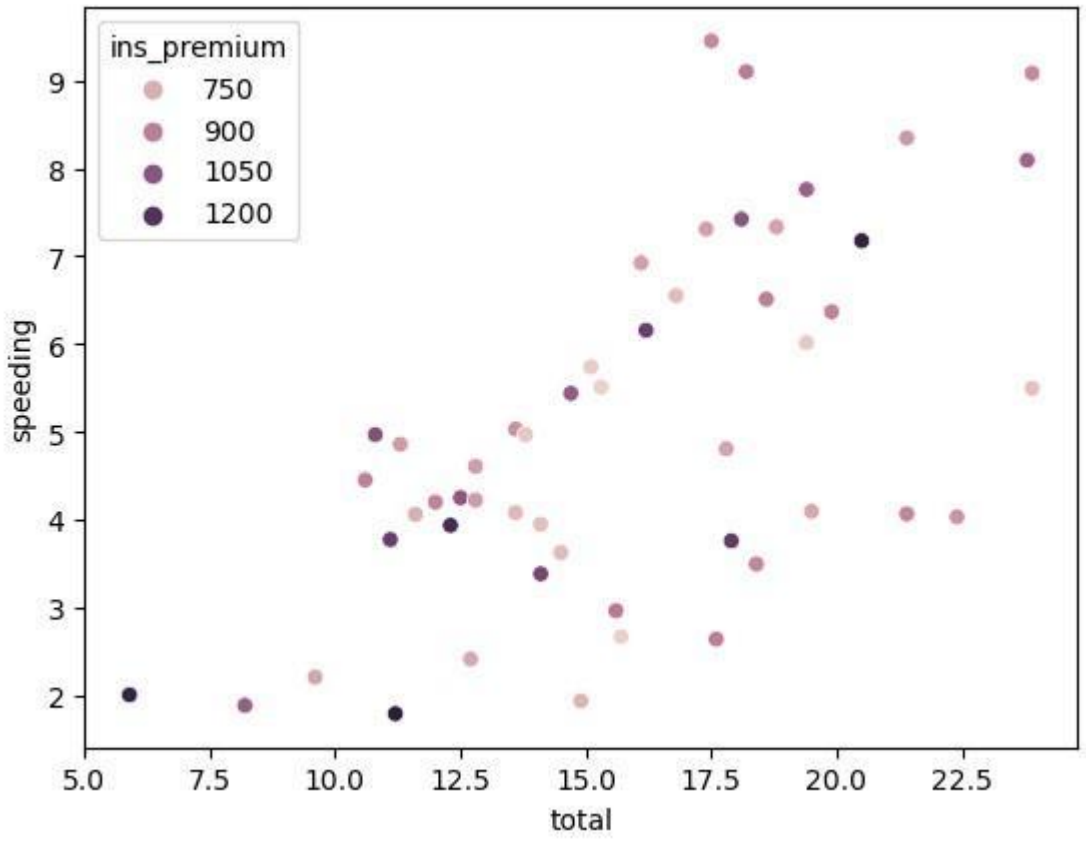


In [28]:
```
sns.scatterplot(x="total",y="not_distracted",data=data,hue="no_previous")
```
<Axes: xlabel='total', ylabel='not_distracted'> Out[28]:



In [29]:
```
sns.scatterplot(x="total",y="speeding",data=data,hue="ins_premium")
```

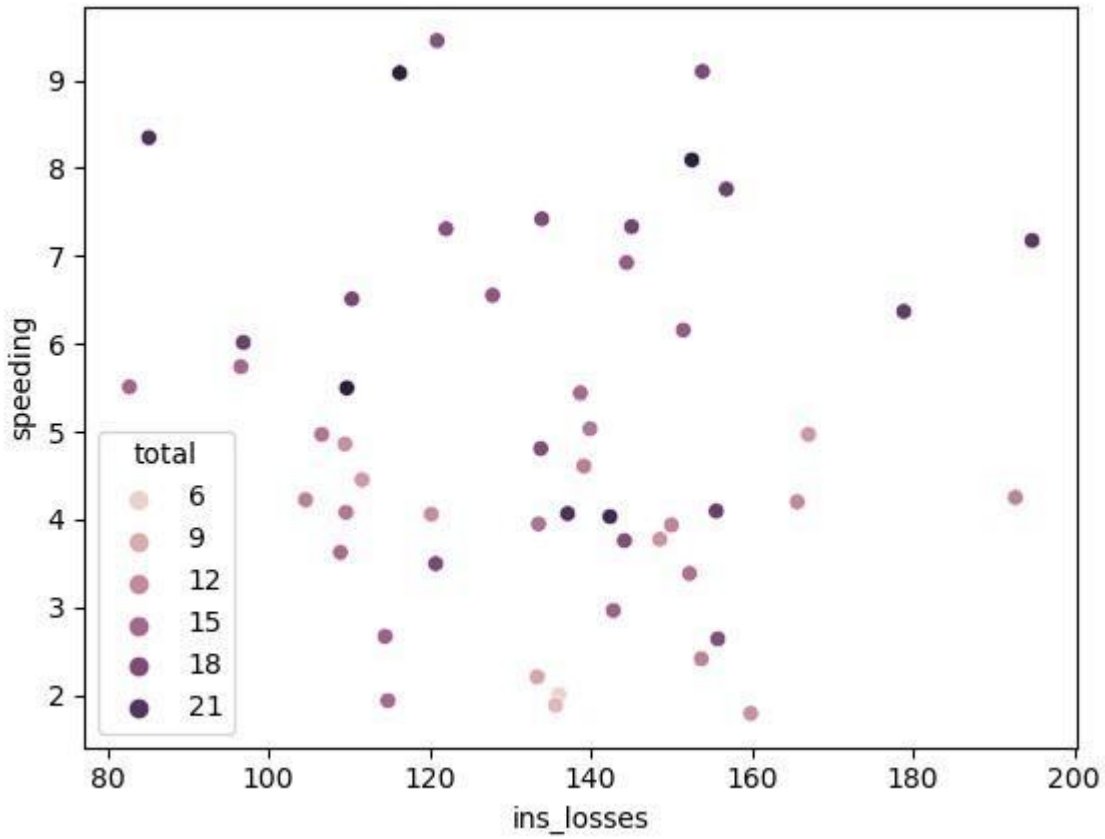
Out[29]:
```
<Axes:  xlabel='total',  ylabel='speeding'>
```



In [30]:
```
sns.scatterplot(x="ins_losses",y="speeding",data=data,hue="total")
```

Out[30]:

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

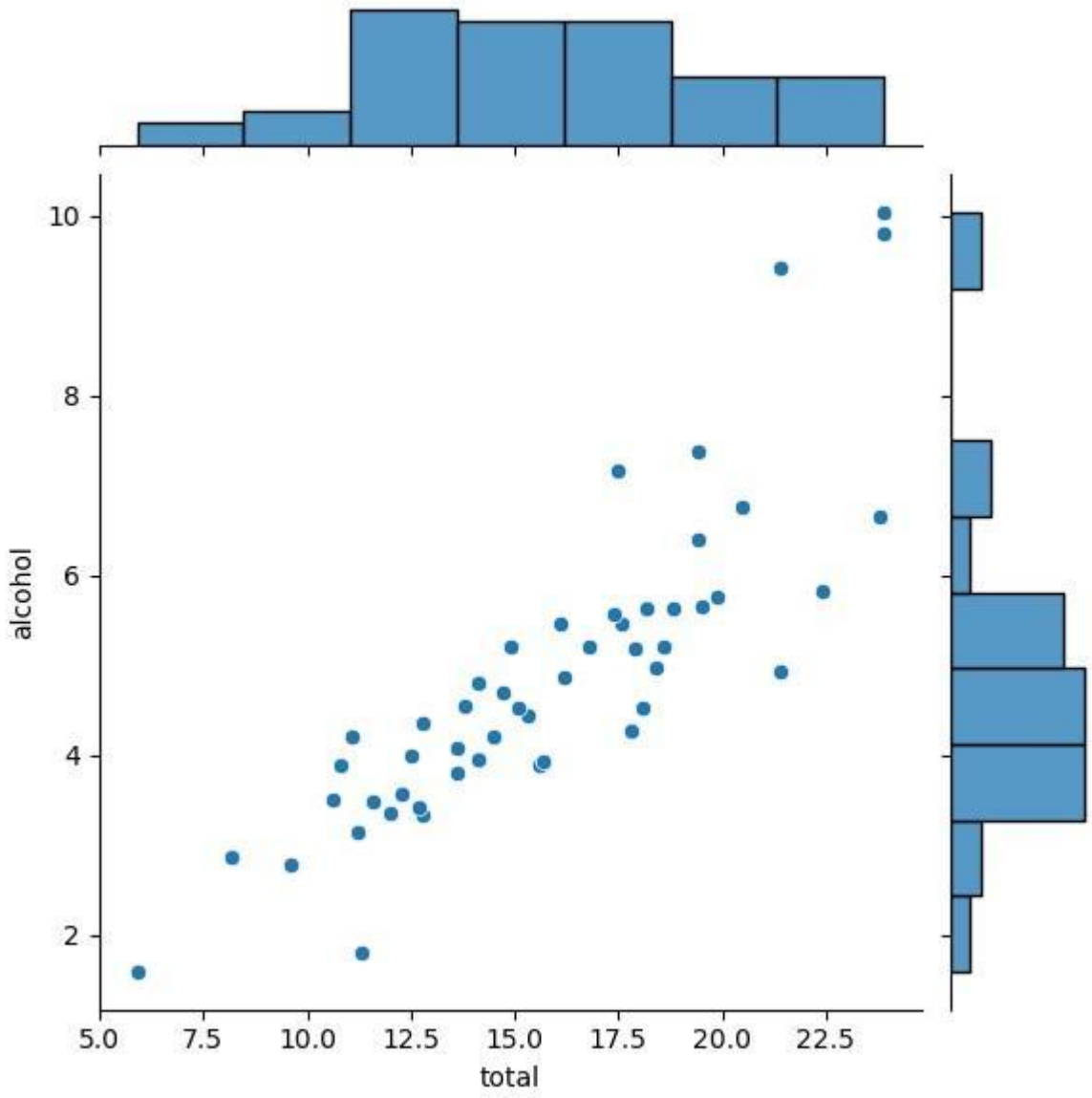


In [31]:

```
sns.jointplot(x="total",y="alcohol",data=data)
```

Out[31]:

```
<seaborn.axisgrid.JointGrid at 0x1ccbfcf6190>
```



In [32]:

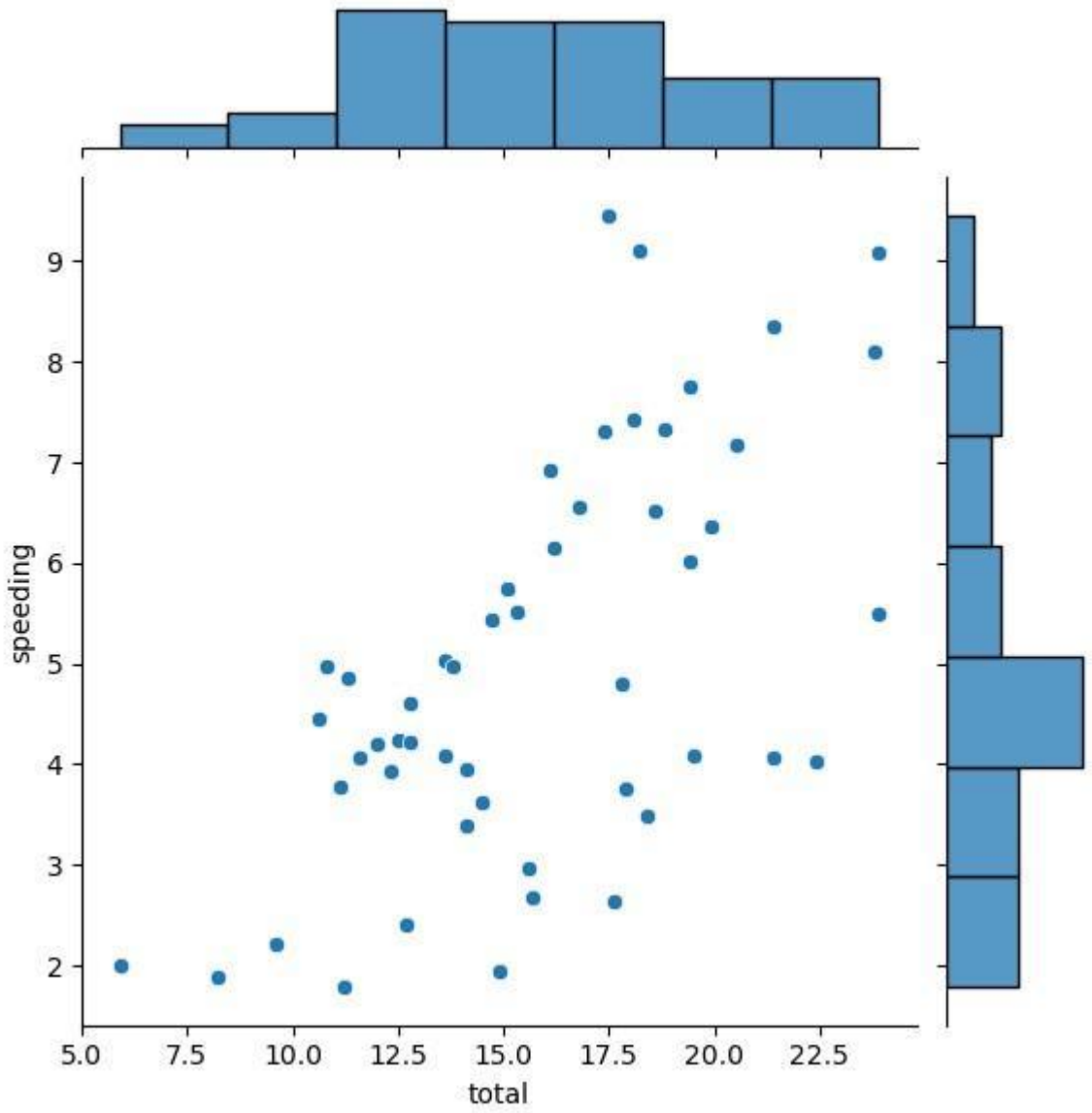
Out[32]:

```
sns.jointplot(x="total",y="speeding",data=data)
```

```
<seaborn.axisgrid.JointGrid at 0x1ccbfc74910>
```

In [33]:

Out[33]:



In [34]:

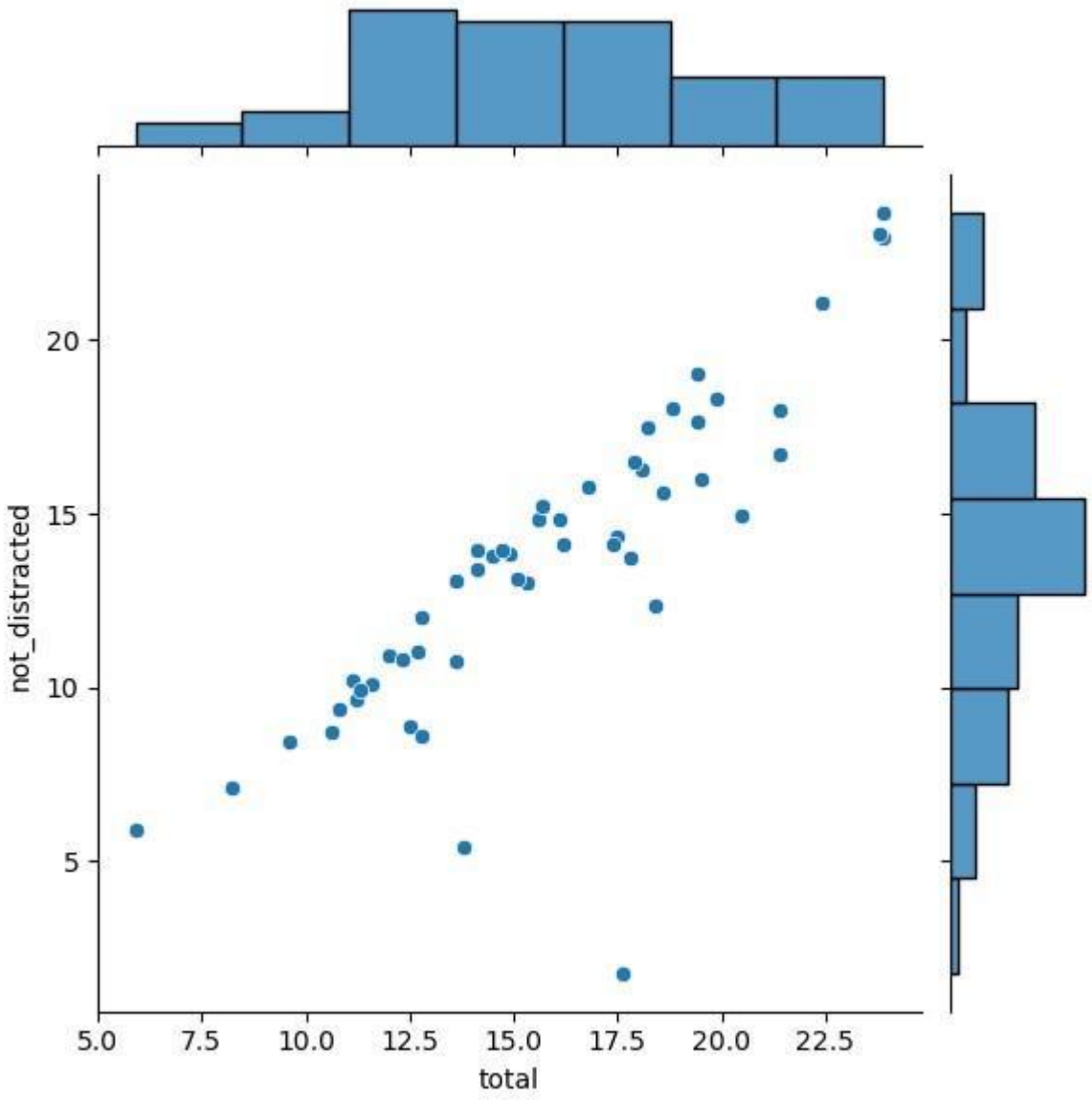
Out[34]:

```
sns.jointplot(x="total",y="not_distracted",data=data)
```

```
<seaborn.axisgrid.JointGrid at 0x1ccbfe4b010>
```

In [35]:

Out[35]:



In [36]:

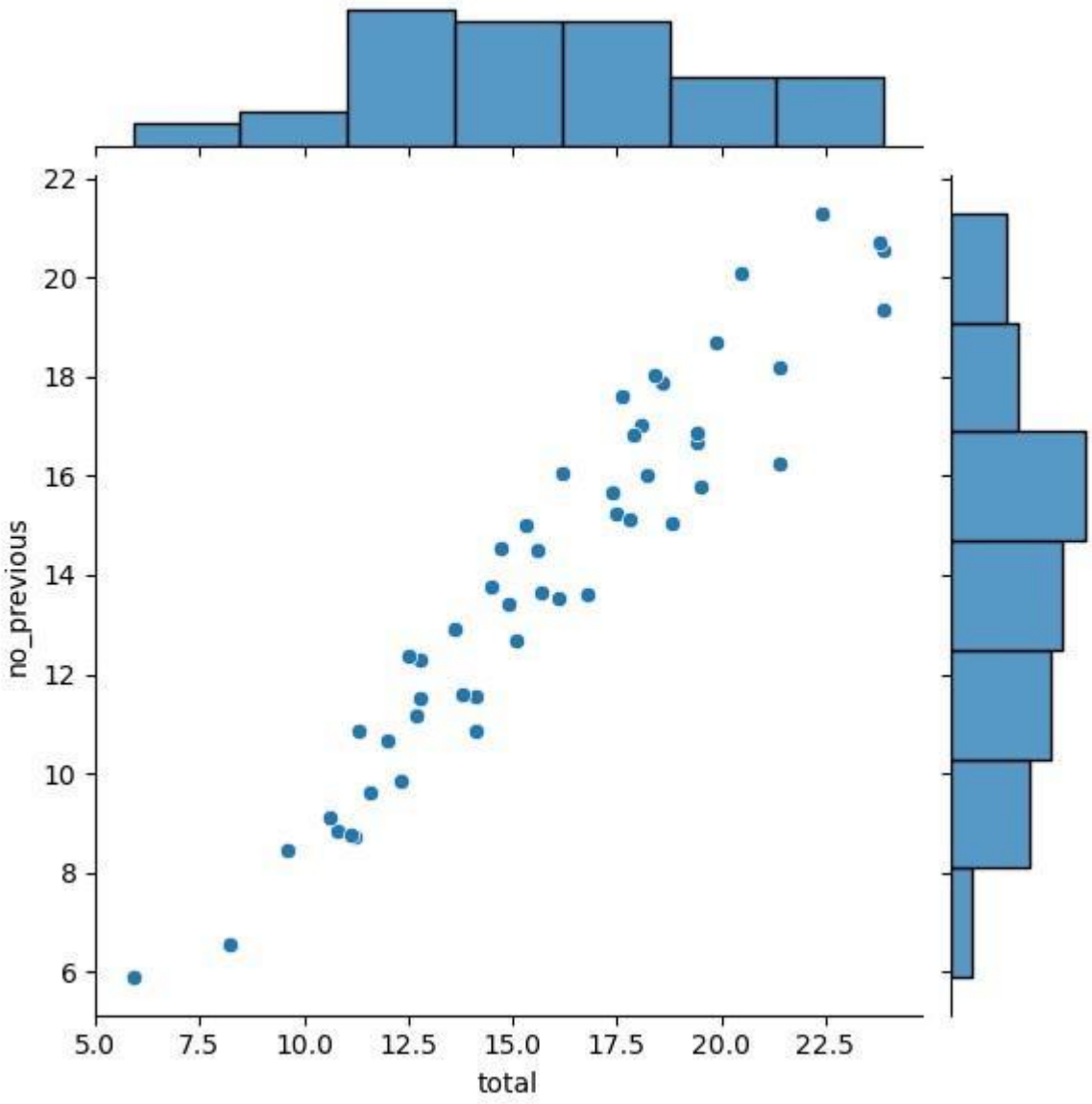
Out[36]:

```
sns.jointplot(x="total",y="no_previous",data=data)
```

```
<seaborn.axisgrid.JointGrid at 0x1ccc0ac4190>
```

In [37]:

Out[37]:


no_previous
total
22
20
18
16
14
12
10
8
6
5.0
7.5
10.0
12.5
15.0
17.5
20.0
22.5

In [38]:

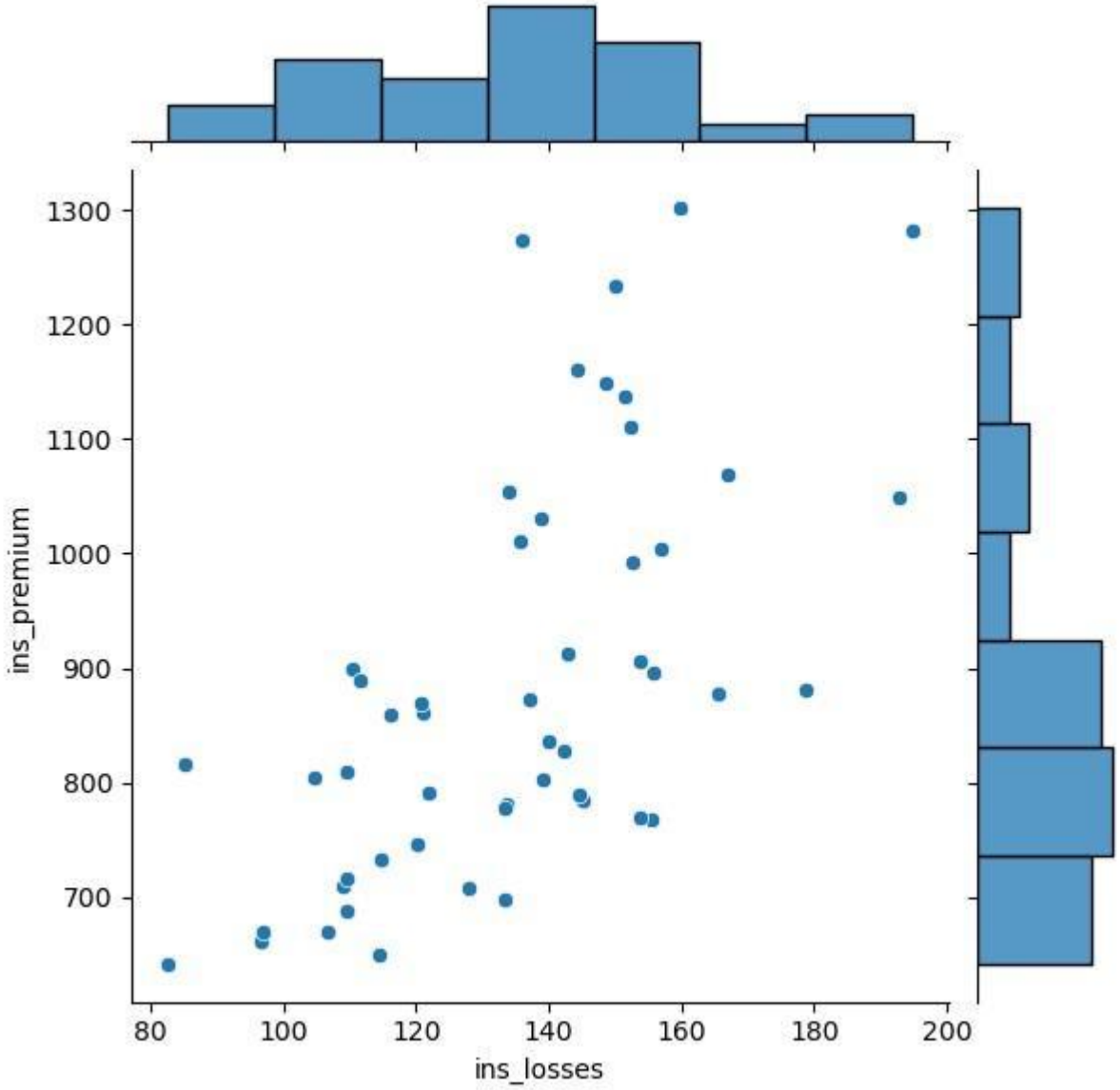
Out[38]:

```
sns.jointplot(x="ins_losses",y="ins_premium",data=data)
```

```
<seaborn.axisgrid.JointGrid at 0x1ccbfe2f2d0>
```

In [39]:

Out[39]:


ins_premium
1300
1200
1100
1000
900
800
700
80
100
120
140
160
180
200
ins_losses

In [40]:

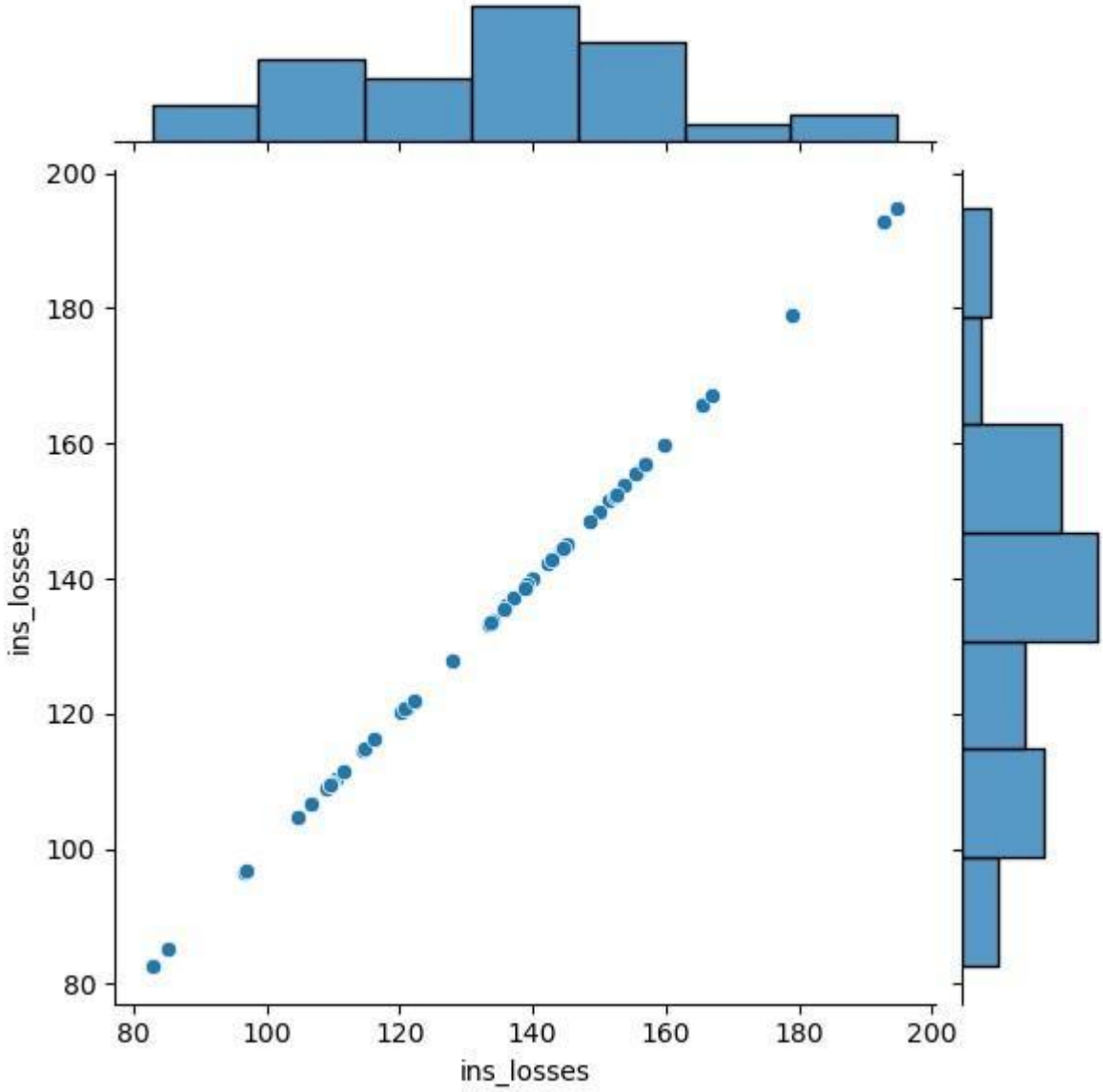
Out[40]:

```
sns.jointplot(x="ins_losses",y="ins_losses",data=data)
```

```
<seaborn.axisgrid.JointGrid at 0x1ccbe4dc810>
```

In [41]:

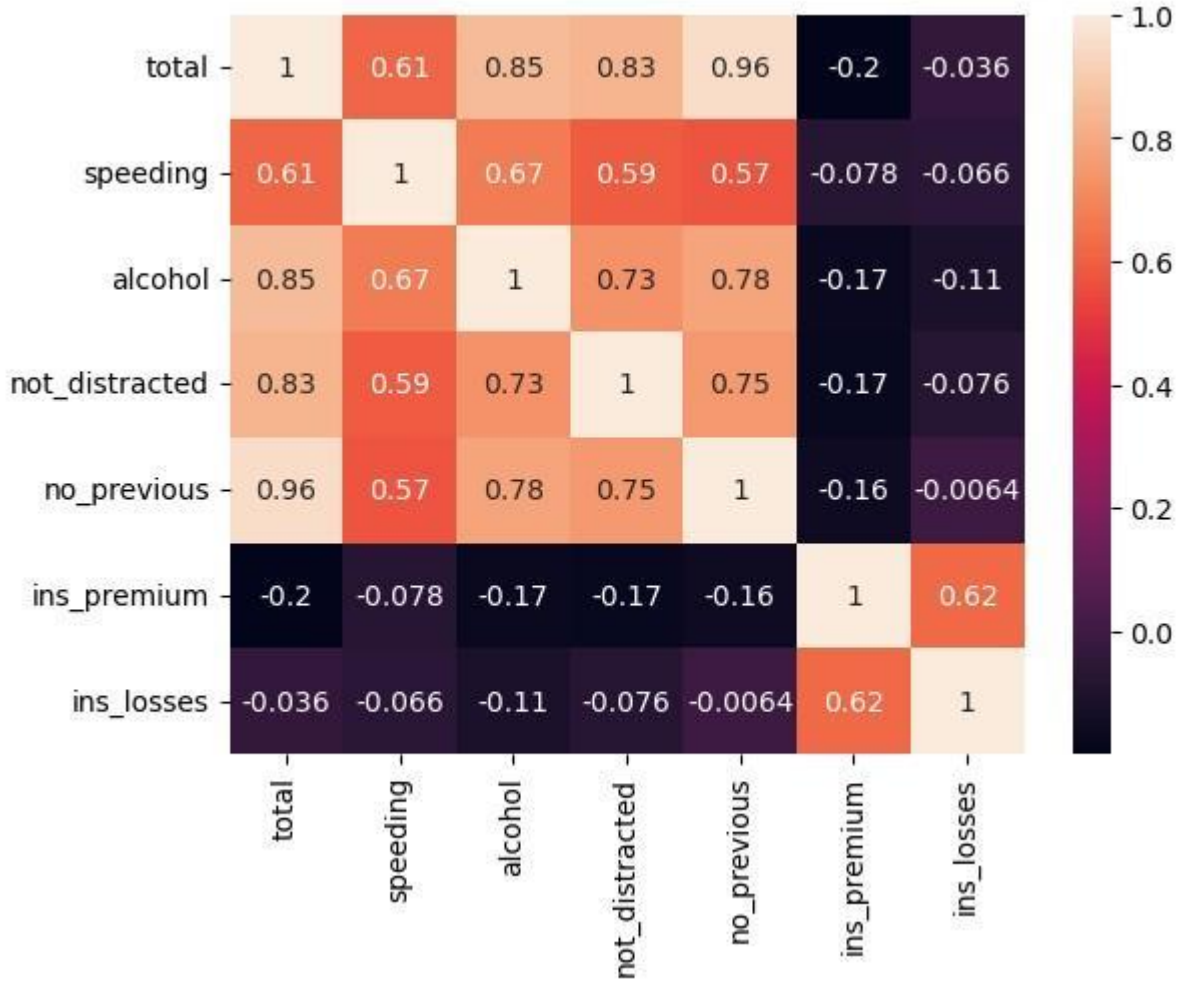
Out[41]:



In [37]:
```
corr = data.corr()
```

```
C:\Users\karth\AppData\Local\Temp\ipykernel_14884\1351907255.py:1: FutureWarning:
The default value of numeric_only in DataFrame.corr is deprecated. In a future
version, i t will default to False. Select only valid columns or specify the value
of numeric_on ly to silence this warning.   corr = data.corr()
```

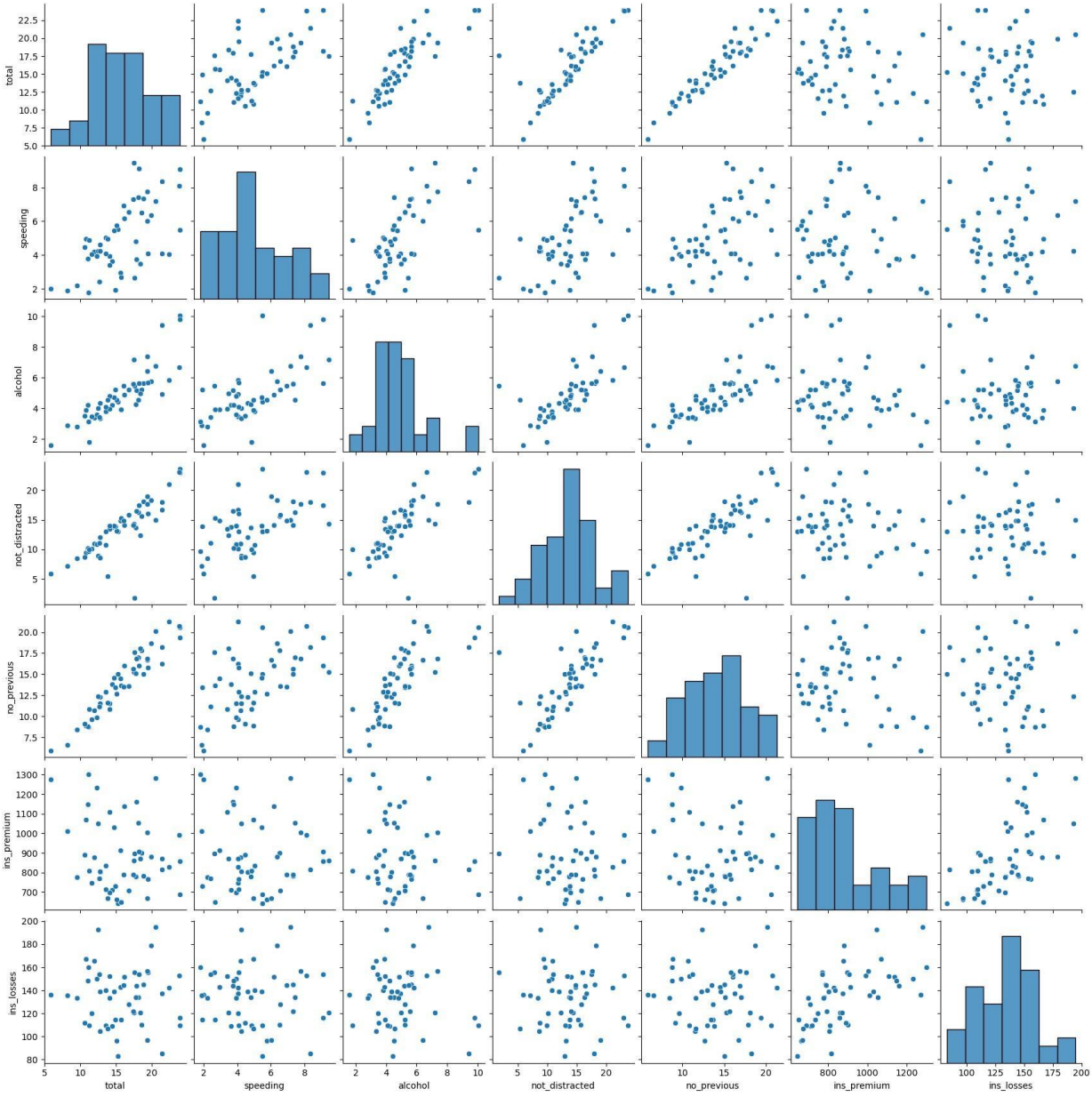
In [38]:
```
sns.heatmap(corr,annot=True)
```



Out[38]: <Axes: >

In [39]:
```
sns.pairplot(data)
```

Out[39]: <seaborn.axisgrid.PairGrid at 0x1ccc1b96890>


total
speeding
alcohol
not_distracted
no_previous
ins_premium
ins_losses