EXPERIMENT – 6

TO UNDERSTAND EDA – QUANTITATIVE AND QUALITATIVE

Aim:

To understand quantitative and qualitative of EDA

Procedure:

- Import all the necessities
- Upload default dataset ‘tips’
- Use pandas to read and make it as DataFrame
- Then perform various plots and joints using seaborn and other libraries

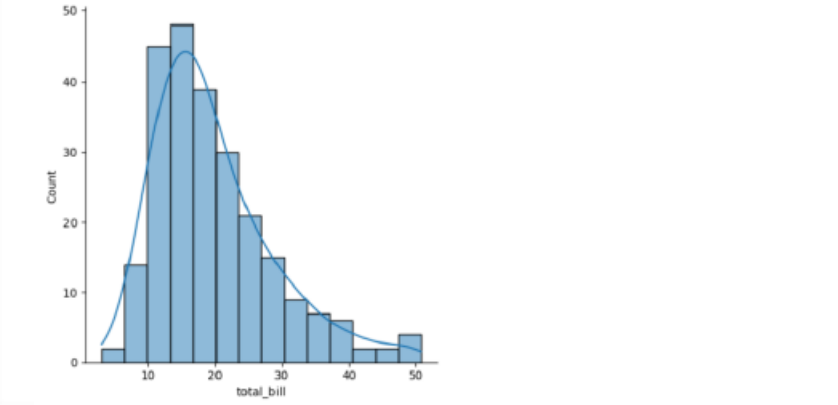
Program:

```
import seaborn as sns
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
tips=sns.load_dataset('tips')
tips.head()
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| 0 | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| 1 | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| 2 | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| 3 | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| 4 | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |

```
sns.displot(tips.total_bill,kde=True)
```

```
<seaborn.axisgrid.FacetGrid at 0x7e56bd573ec0>
```



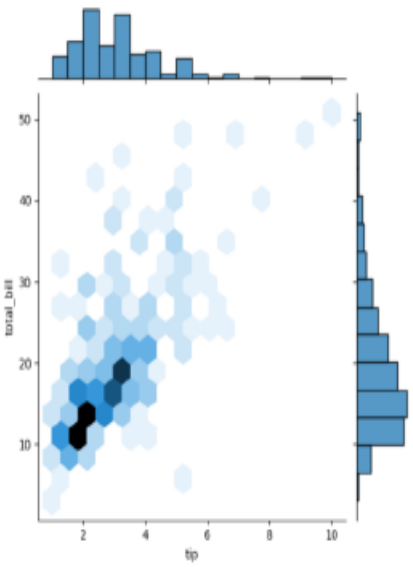

```
sns.displot(tips.total_bill,kde=False)
```

```
sns.jointplot(x=tips.tip,y=tips.total_bill)
```

```
sns.jointplot(x=tips.tip,y=tips.total_bill,kind="reg")
```

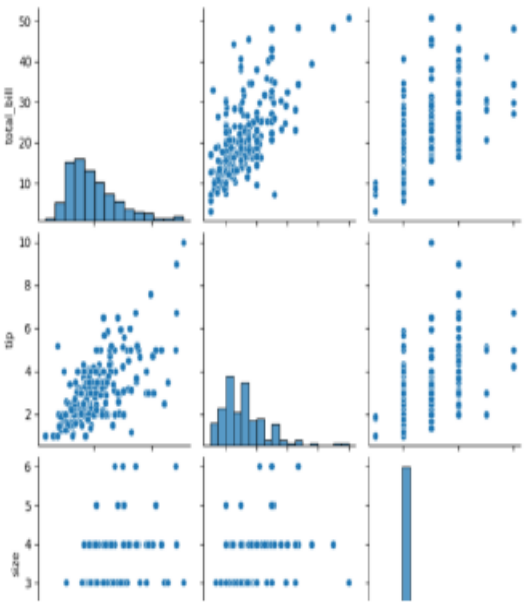
```
sns.jointplot(x=tips.tip,y=tips.total_bill,kind="hex")
```

```
<seaborn.axisgrid.JointGrid at 0x7e569565aaa0>
```




```
sns.pairplot(tips)
```

```
<seaborn.axisgrid.PairGrid at 0x7e5695777f40>
```



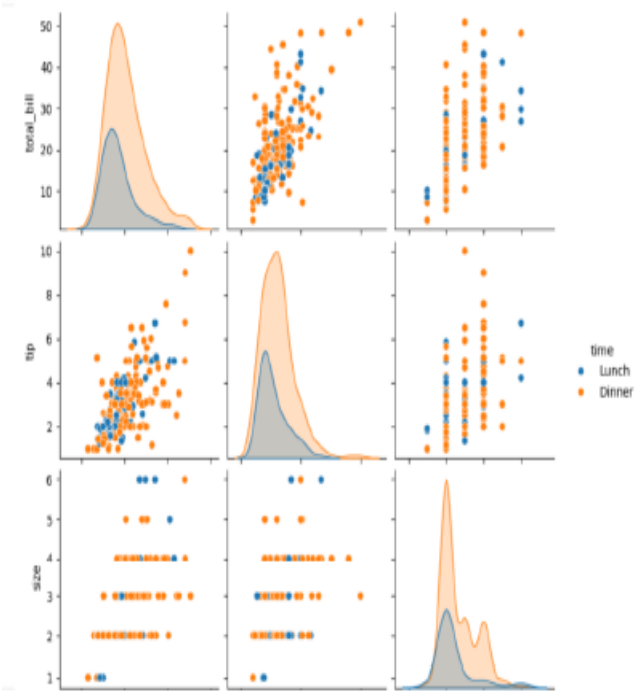

```
tips.time.value_counts()
```

| time | count |
|---|---|
| Dinner | 176 |
| Lunch | 68 |

dtype: int64

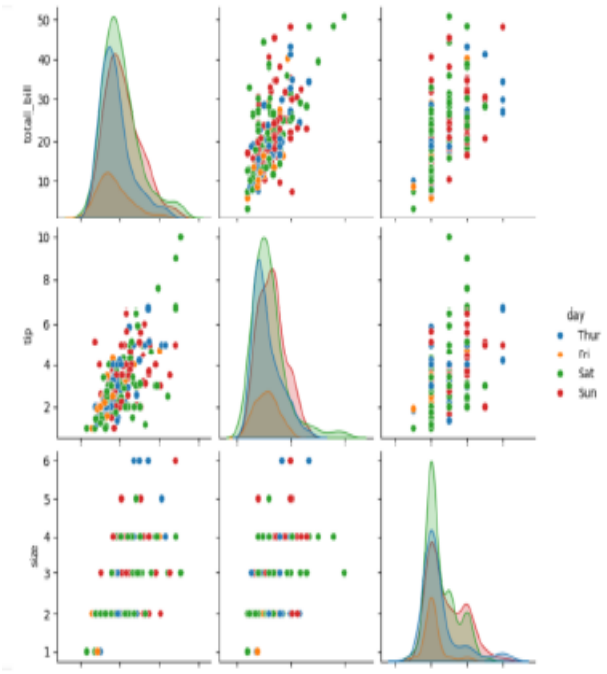
```
sns.pairplot(tips,hue='time')
```

```
<seaborn.axisgrid.PairGrid at 0x7e5694ba1e60>
```



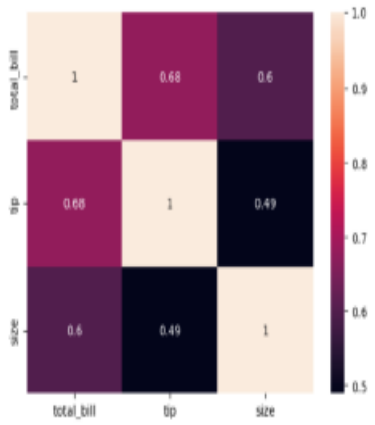

```
sns.pairplot(tips,hue='day')
```

```
<seaborn.axisgrid.PairGrid at 0x7e56065ca1a0>
```



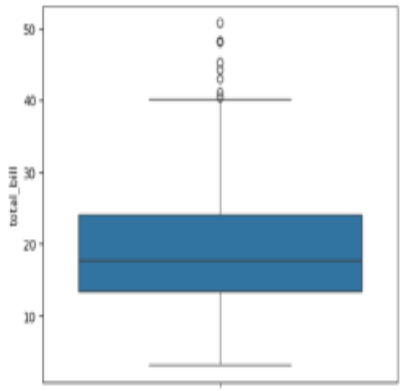
```
sns.heatmap(tips.corr(numeric_only=True),annot=True)
```

```
<Axes: >
```



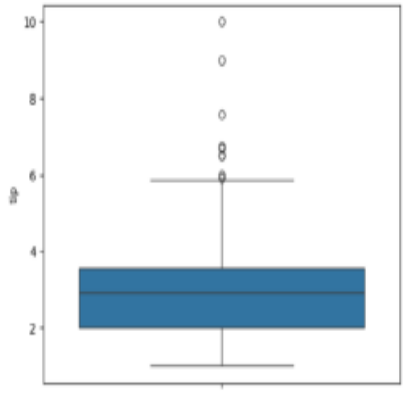

```
sns.boxplot(tips.total_bill)
```

```
<Axes: ylabel='total_bill'>
```



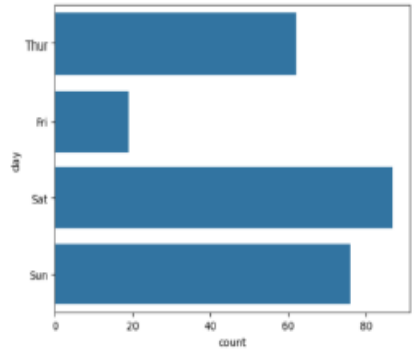

```
sns.boxplot(tips.tip)
```

```
<Axes: ylabel='tip'>
```



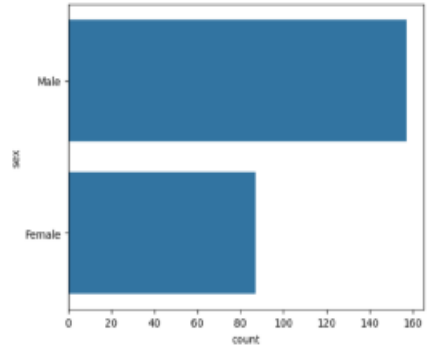
```
sns.countplot(tips.day)
```

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



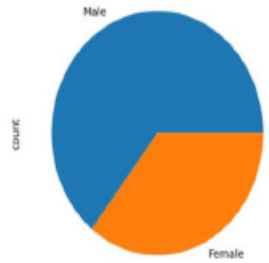

```
sns.countplot(tips.sex)
```

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

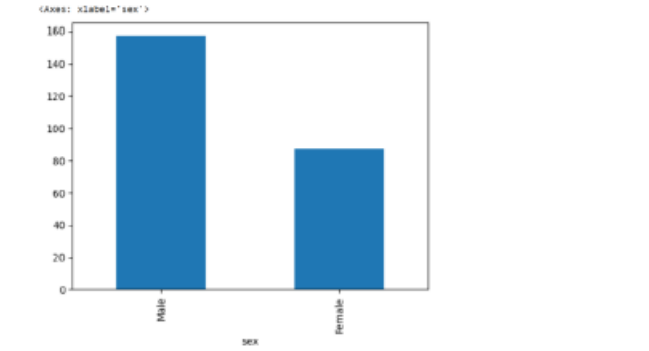



```
tips.sex.value_counts().plot(kind='pie')
```

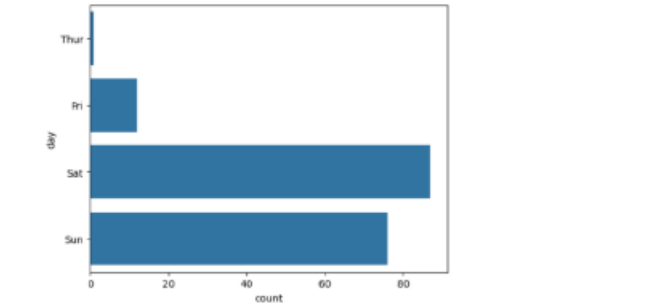
```
<Axes: ylabel='count'>
```



```
tips.sex.value_counts().plot(kind='bar')
```




```
sns.countplot(tips[tips.time=='Dinner']['day'])
```




Result:

Thus the python program to understand EDA is executed and verified successfully