 <b>Marwadi University</b> Marwadi Chandarana Group	<b>Marwadi University</b> <b>Faculty of Engineering &amp; Technology</b> <b>Department of Information and Communication Technology</b>	
<b>Subject: Programming With Python (01CT1309)</b>	<b>Aim:</b> Practical based on Data Visualization with Seaborn	
<b>Experiment No: 27</b>	<b>Date:</b>	<b>Enrollment No: 92510133025</b>

**Aim:** Practical based on Data Visualization with Seaborn

**IDE:**

Installation

```
pip install seaborn
```

Histplot: Seaborn Histplot is used to visualize the univariate set of distributions(single variable). It plots a histogram, with some other variations like kdeplot and rugplot.

```
import numpy as np
```

```
import seaborn as sns
```

```
sns.set(style="white")
```

```
# Generate a random univariate dataset
```


```
rs = np.random.RandomState(10)
```

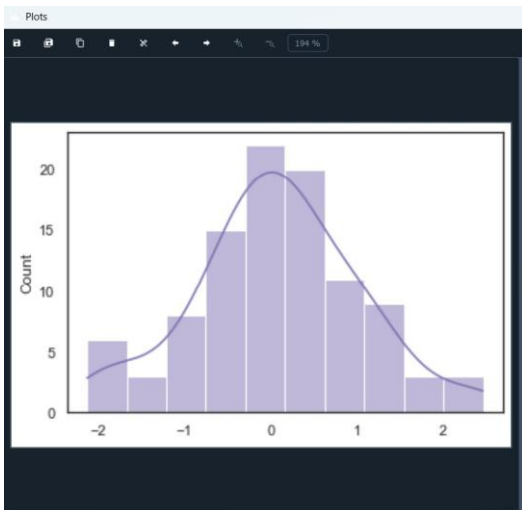
```
d = rs.normal(size=100)
```

```
# Plot a simple histogram and kde
```

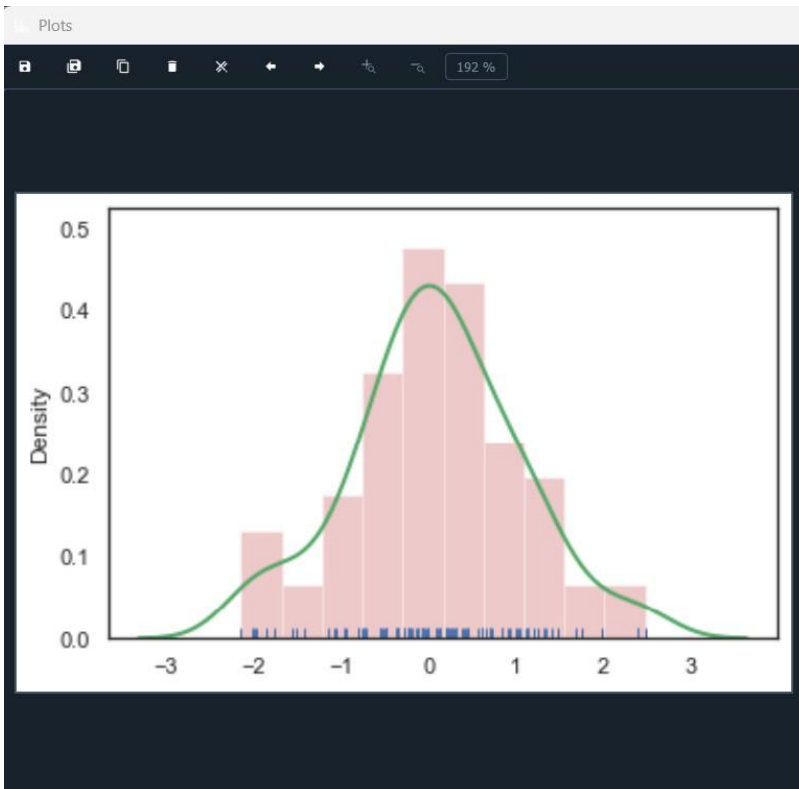
```
sns.histplot(d, kde=True, color="m")
```


Output

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Distplot: Seaborn distplot is used to visualize the univariate set of distributions (Single features) and plot the histogram with some other variations like kdeplot and rugplot.



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**Lineplot:** The line plot is one of the most basic plots in the seaborn library. This plot is mainly used to visualize the data in the form of some time series, i.e. in a continuous manner.

```
import seaborn as sns
```

```
sns.set(style="dark")
```

```
fmri = sns.load_dataset("fmri")
```

```
# Plot the responses for different\
```

```
# events and regions
```

```
sns.lineplot(x="timepoint",
```

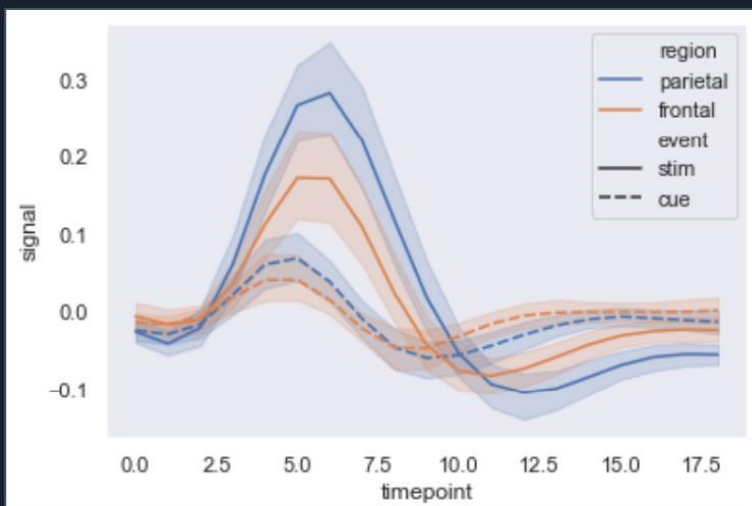
```
    y="signal",
```


```
    hue="region",
```

```
    style="event",
```

```
    data=fmri)
```

```
output
```



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**Implot:** The Implot is another most basic plot. It shows a line representing a linear regression model along with data points on the 2D space and x and y can be set as the horizontal and vertical labels respectively.

```
import seaborn as sns
```

```
sns.set(style="ticks")
```

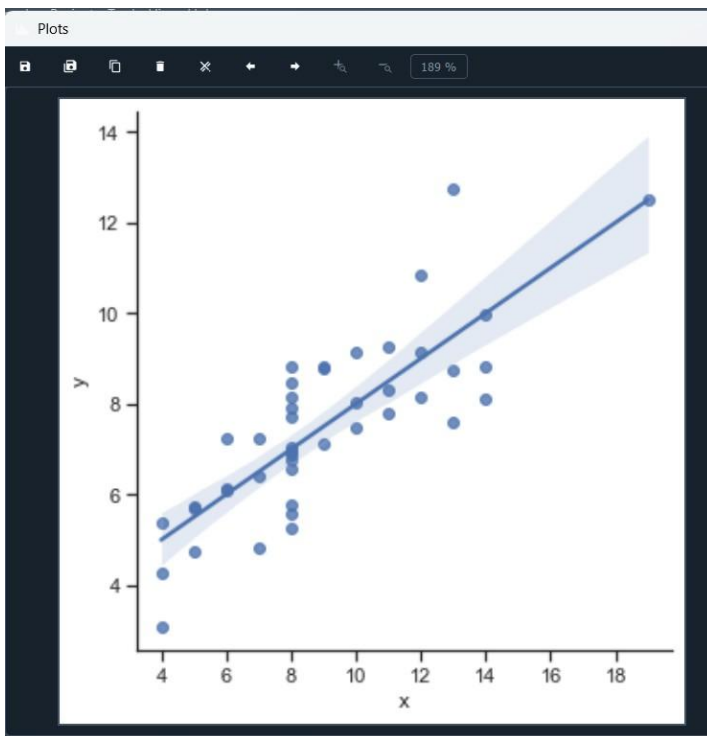
```
# Loading the dataset
```


```
df = sns.load_dataset("anscombe")
```

```
# Show the results of a linear regression
```

```
sns.lmplot(x="x", y="y", data=df)
```

Output



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## Post Lab

Visualize the data with a box plot and pandas:

```
import pandas as pd
```

```
import seaborn as sns
```

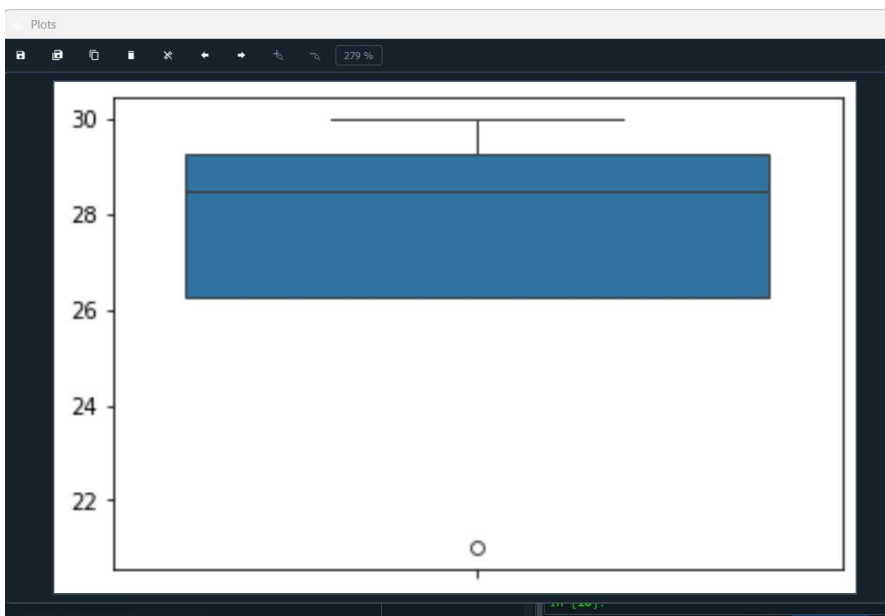
```
# initialise data of lists
```


```
data = {'Name': [ 'Mohe' , 'Karnal' , 'Yrik' , 'jack' ],
```

```
        'Age': [ 30 , 21 , 29 , 28 ]}
```

```
df = pd.DataFrame( data )
```

```
sns.boxplot( data['Age'] )
```



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Draw the violin plot with Pandas

```
import pandas as pd
```

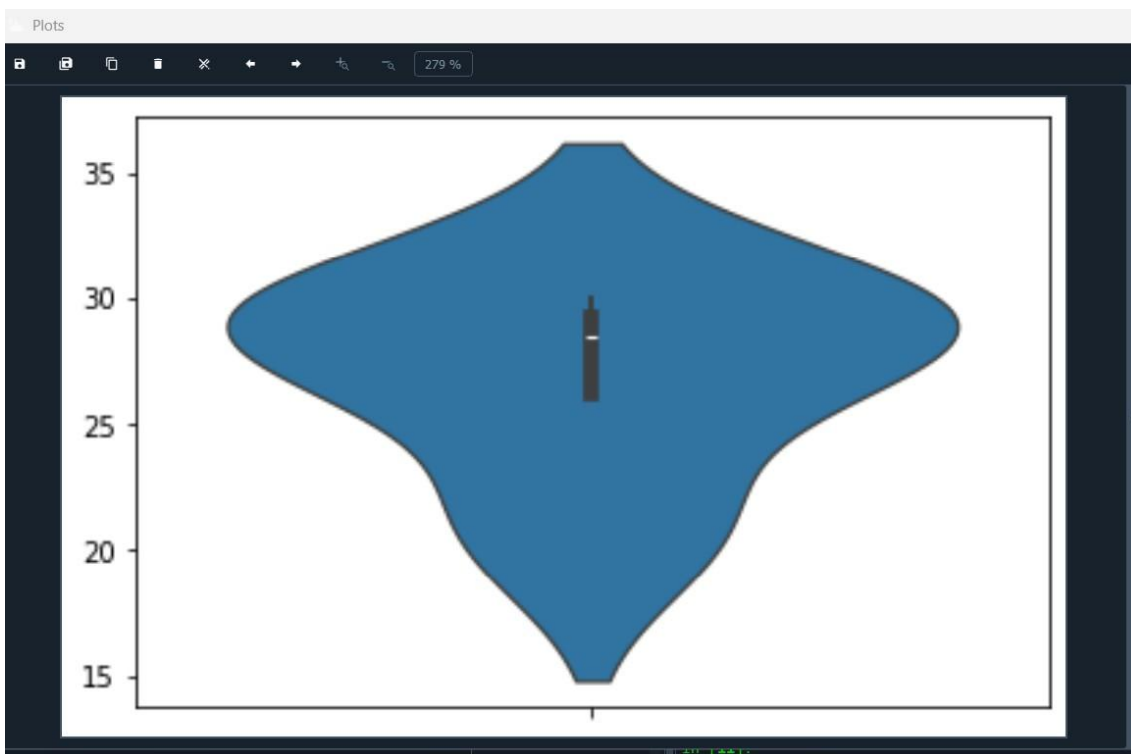
```
import seaborn as sns
```

```
# initialise data of lists
```

```
data = {'Name': [ 'Mohe' , 'Karnal' , 'Yrik' , 'jack' ],
        'Age': [ 30 , 21 , 29 , 28 ]}
```

```
df = pd.DataFrame( data )
```

```
sns.violinplot(data['Age'])
```



Github link: [https://github.com/JenishDesai5115/PWP\\_postlabs](https://github.com/JenishDesai5115/PWP_postlabs)