Package 1. Import Pandas and Plotpy and explore their functionalities.

- **Pandas**

Import panda

  Or

  Import pandas as pd Pandas Series:

Program:

```
Import pandas as pd
a=[1,2,3]
s=pd.series(a)
print(s)
```

Output:

```
0   1
1   2
2   3
dtype: int64
```

Labels:
Program:

```
import pandas as pd
a=[1,2,3]
s=pd.Series(a)
print(s[0])
```

Output:

  1

Creating Labels:
Program

```
import pandas as
pd a=[1,2,3]
s=pd.Series(a,index=
'a','b','c') print(s)
```

Output:

```
a
1
b
2
 c   3
```

• **Plotpy import matplotlib.pyplot as plt**

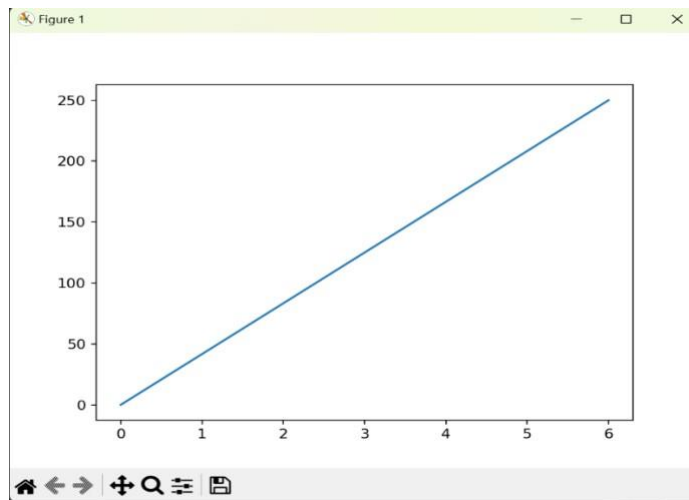**Matplotlib Line Plot:**
Program:

```
import
matplotlib.pyplot as
plt import numpy as
np xpoints =
np.array([0, 6])
ypoints =
np.array([0, 250])
plt.plot(xpoints,
ypoints) plt.show()
```

output:

2. Python Data Frame
DataFrames:
Program:
```
 import pandas as pd
a={"Fruits":["apple","mango","kiwi"], "Qty.":[1,2,3],
"color":["red","Yellow","Rust"] }
df=pd.DataFrame(a)
print(df)
```
Output:
```
Fruits  Qty.   color
0   apple    1    red
1   mango    2 Yellow
2   kiwi    3   Rust
```

Index in DataFrame:
Program:
```
import pandas

as pd a={

"Fruits":["apple","mango","kiwi"],
"Qty
":[1,
2,3]
}
df=pd.DataFrame(a,index=["x","y","z"])
```

```
print(df)
```

```
Fruits Qty x
apple 1
y  mango  2
z  kiwi    3
```

Loc :
Program:

```
import pandas as pd a={
"Fruits":["apple","mango","kiwi"],
"Qty":[1,2,3] }
df=pd.DataFrame(a,index=["x","y","z"]) Output:
print(df.loc["x"]) Fruits  apple
Qty         1
    Name: x, dtype: object
```