```
                                        #GE ASSIGNMENT 3
#1.>Write a program to create a PANDAS Data Series as shown below:
#PLOT GRAPHS:


import pandas as pd
import matplotlib.pyplot as plt
product=pd.Series({'1221':20,'1222':55,'1223':30,'1224':70,'1225':40,'1226':60})
product.name='sales'
product.index.name='product ID'
print(product)

product.plot(marker='X', ms=15,mec='r',mfc='r',color='r',linestyle='--',label='Makers',figsize=(5,5))
plt.xlabel('product ID')
plt.ylabel('sales')
plt.legend(loc='lower center')
plt.show()

product.plot.area(color='b',label='Marks',figsize=(5,5))
plt.xlabel('product ID')
plt.ylabel('sales')
plt.legend(loc='lower center')
plt.show()

product.plot.bar(color='c',label='Marks',figsize=(3,3))
plt.xlabel('product ID')
plt.ylabel('sales')
plt.legend(loc='lower center')
plt.show()
```

```
product.plot.barh(color='c',label='Marks',figsize=(3,3))
plt.xlabel('product ID')
plt.ylabel('sales')
plt.legend(loc='lower center')
plt.show()

product.plot.box(color='m',label='product ID',figsize=(3,3))
plt.ylabel('sales')
plt.show()

product.plot.hist(bins=6,figsize=(3,3))
plt.ylabel('sales')
plt.show()

product.plot.pie(label='Marks',autopct='%1.1f%%')
plt.ylabel('sales')
plt.show()

print('.....................................................................')
```

```
product ID
1221    20
1222    55
1223    30
1224    70
1225    40
1226    60
Name: sales, dtype: int64
```

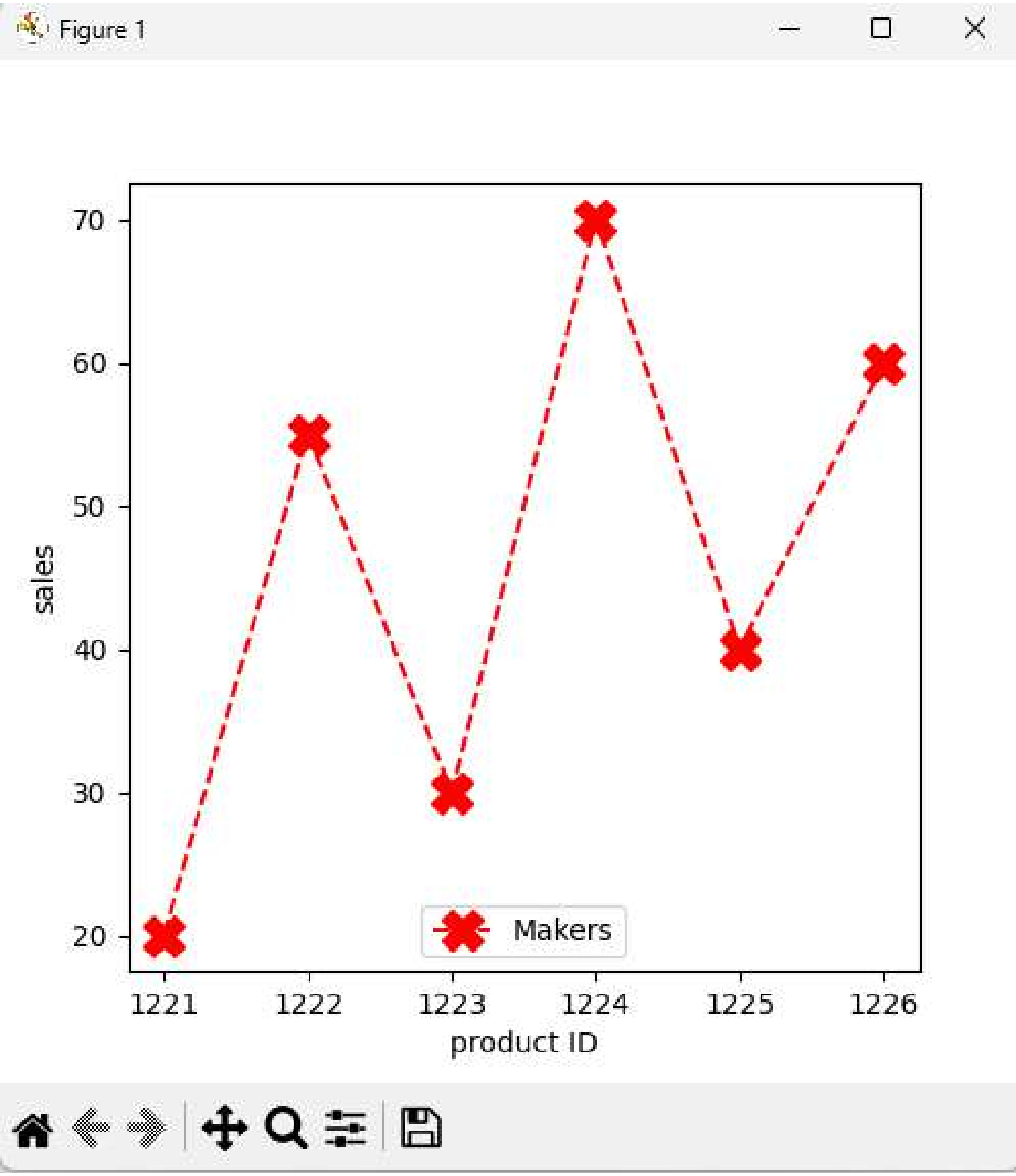
Figure 1
70
60
50
40
30
20
sales
Makers
1221
1222
1223
1224
1225
1226
product ID

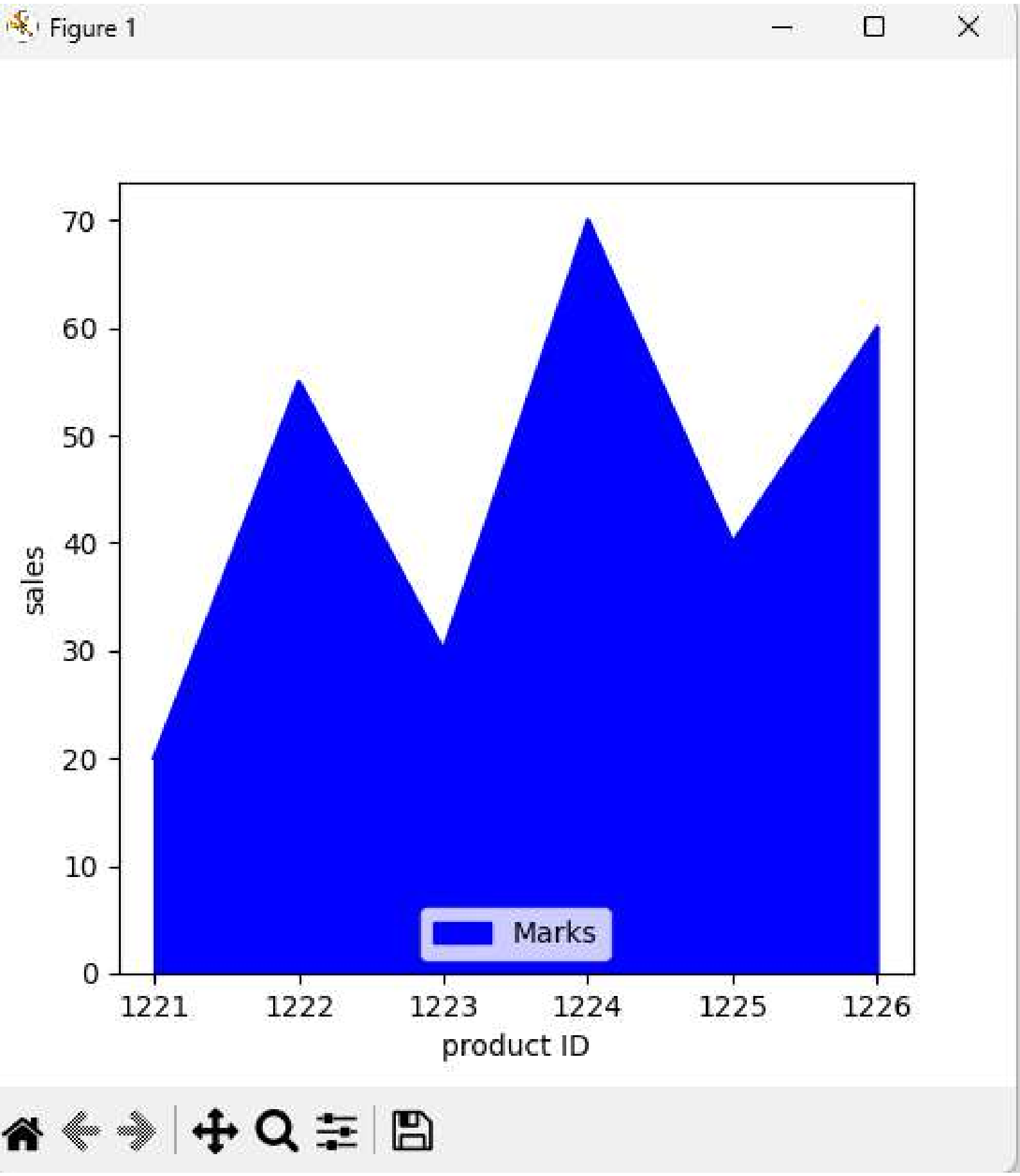
Figure 1
70
60
50
40
30
20
10
0
sales
Marks
1221
1222
1223
1224
1225
1226
product ID

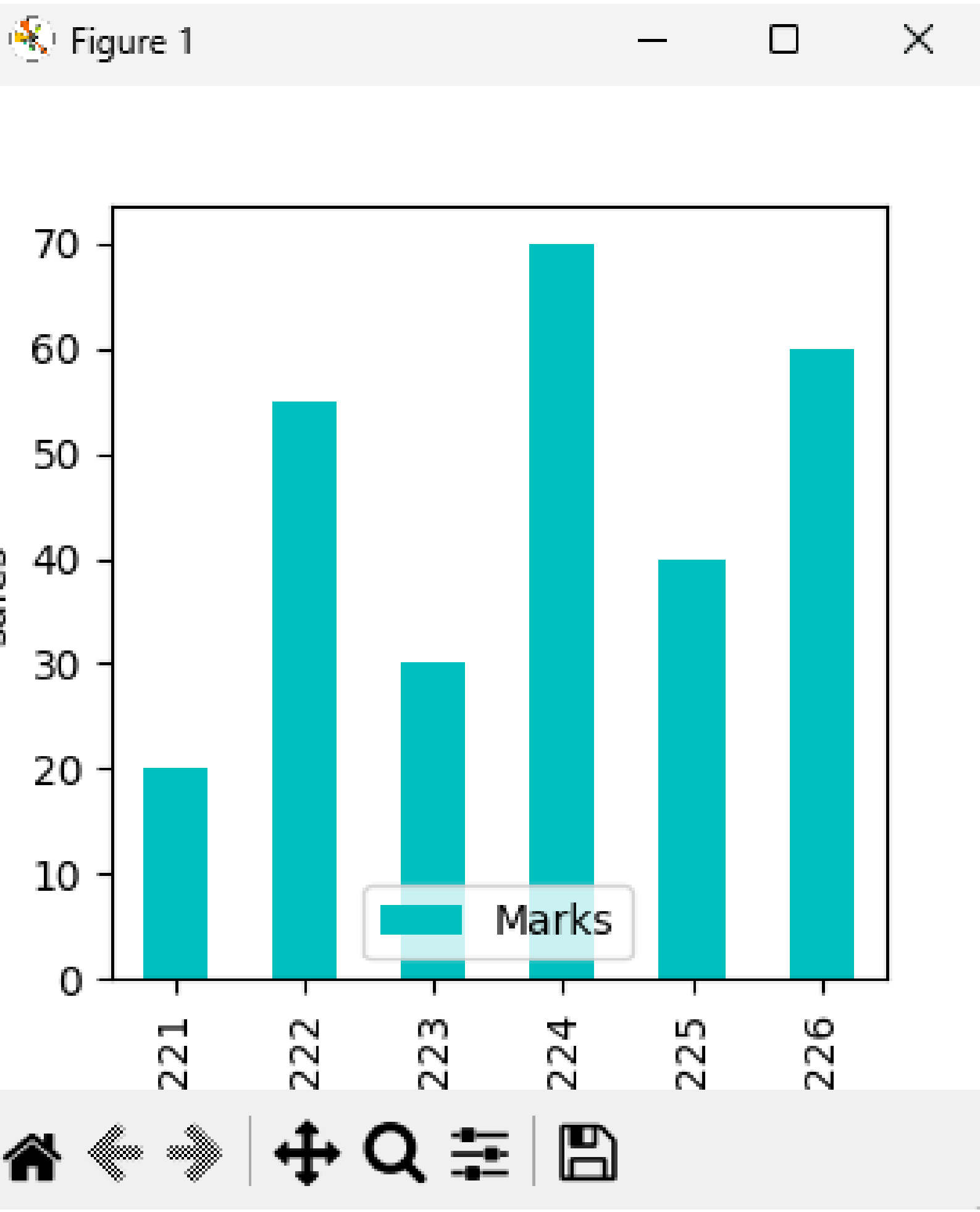
Figure 1
70
60
50
40
30
20
10
0
Marks
221
222
223
224
225
226

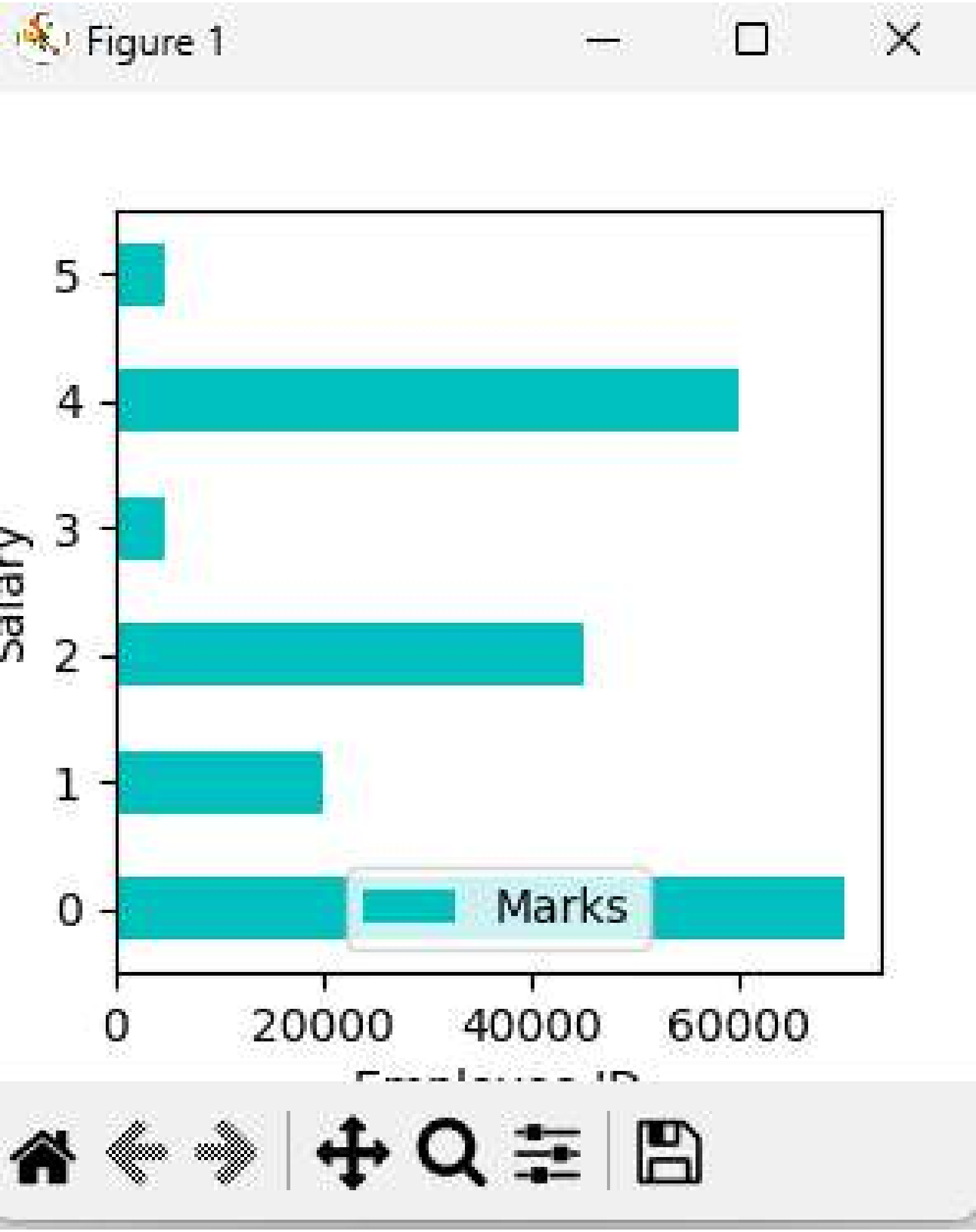
Figure 1
5
4
3
2
1
0
Marks
0
20000
40000
60000

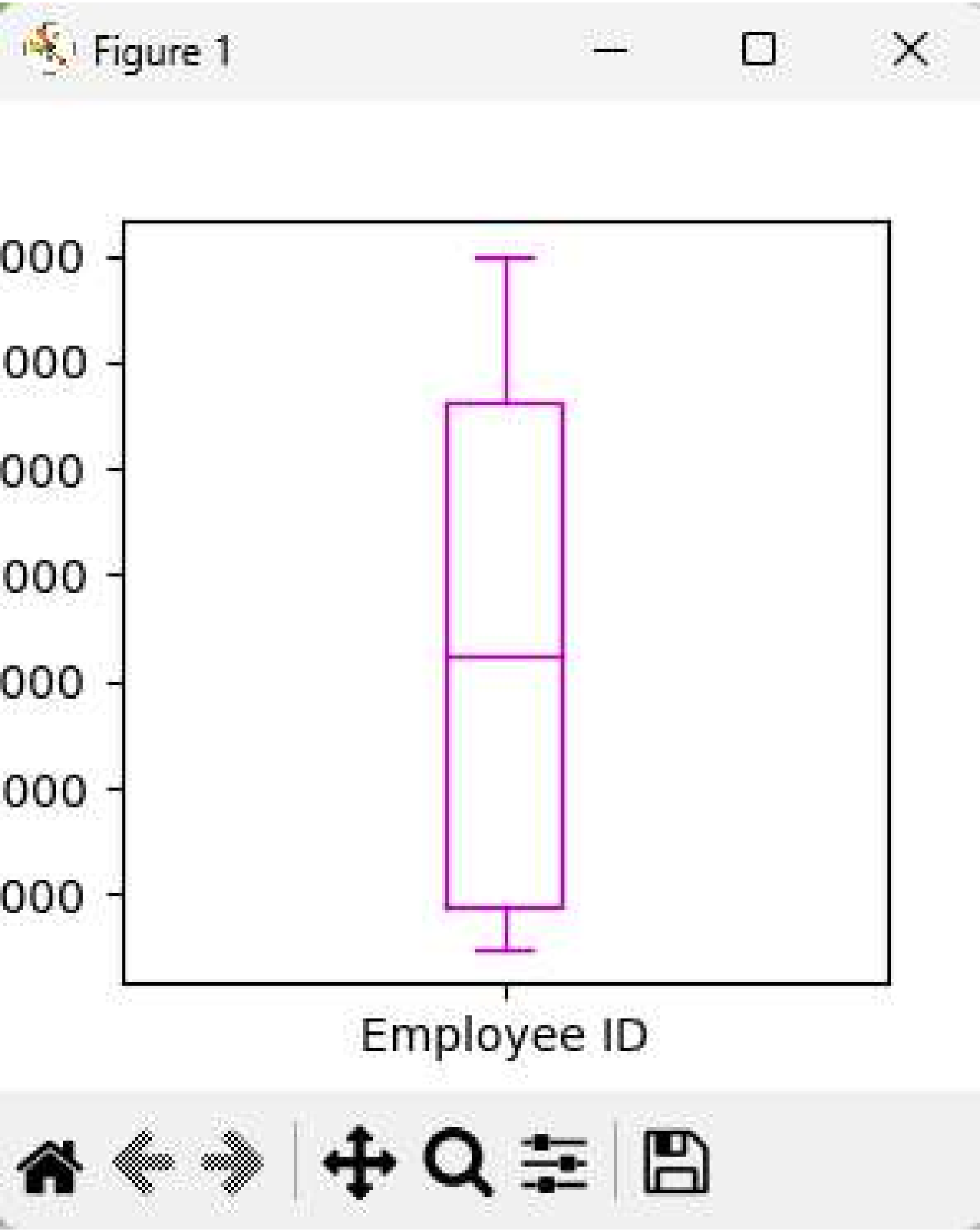
Figure 1
000
000
000
000
000
000
000
Employee ID

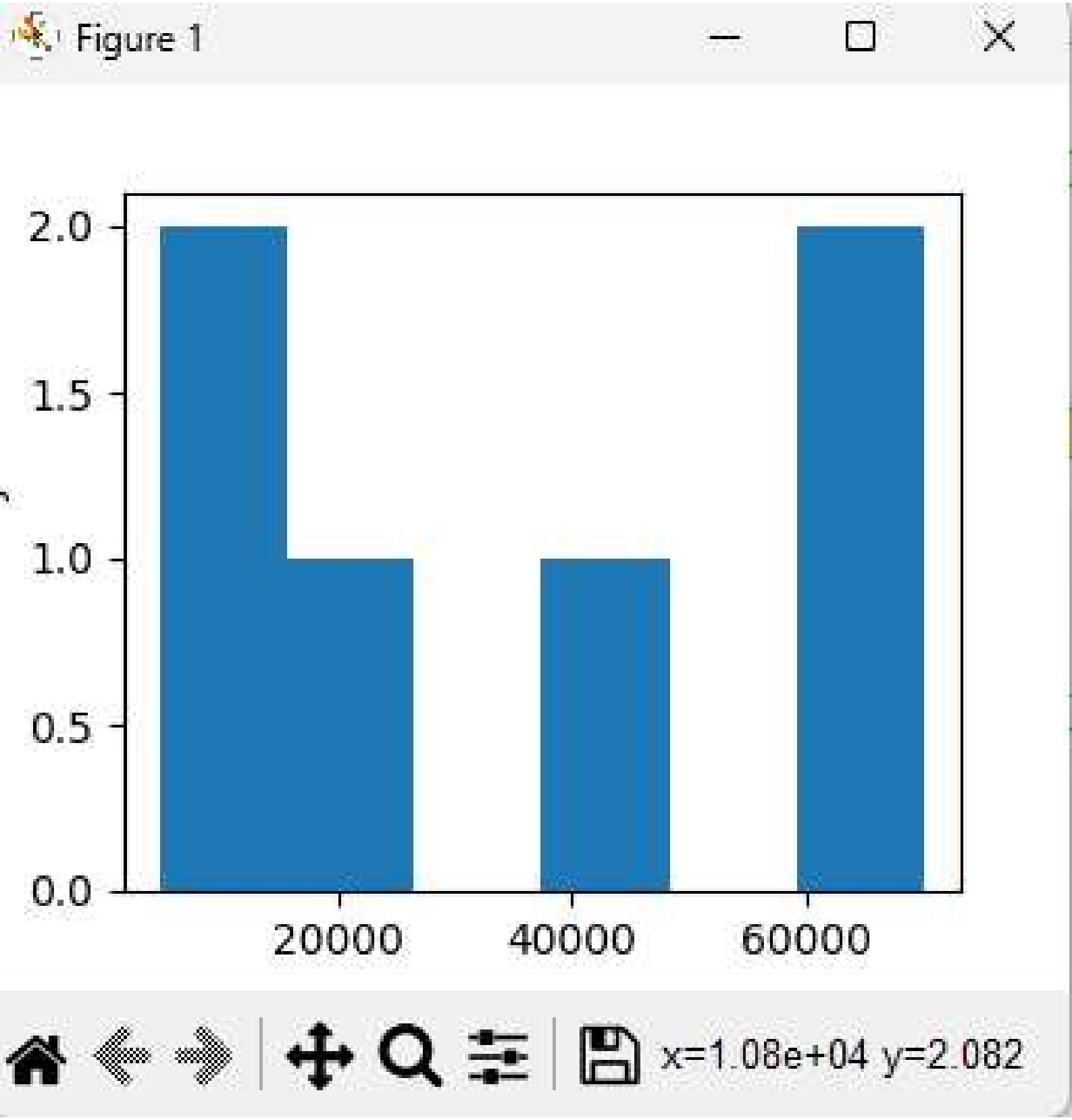
Figure 1
2.0
1.5
1.0
0.5
0.0
20000
40000
60000
x=1.08e+04 y=2.082

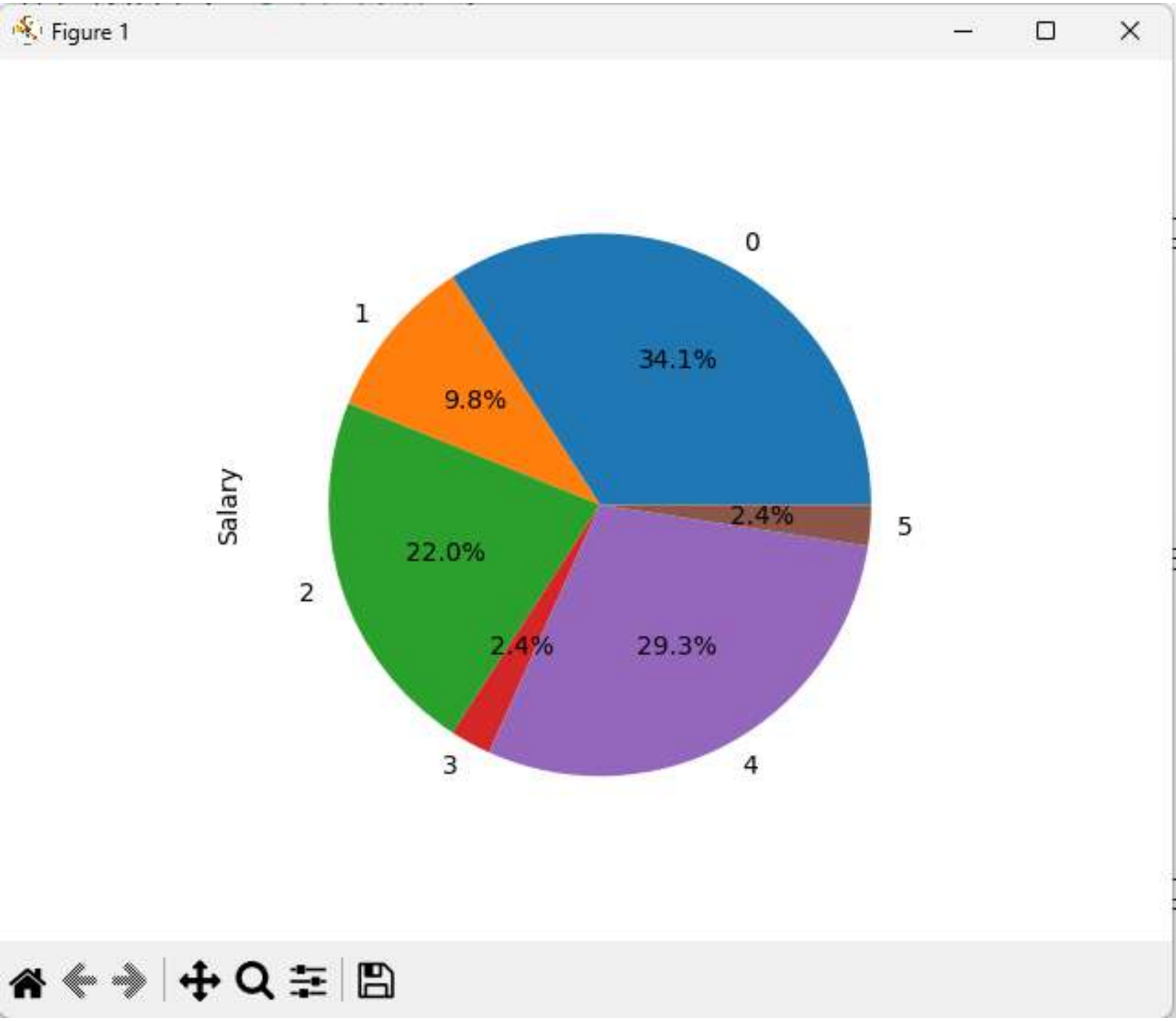
Figure 1
Salary
0
1
2
3
4
5
34.1%
9.8%
22.0%
2.4%
29.3%
2.4%

```
#2.>Write a program to create a PANDAS Data Series as shown below:
#Plot Graphs


salary=pd.Series({'0':70000,'1':20000,'2':45000,'3':5000,'4':60000,'5':5000})
salary.name='SALARY'
salary.index.name='EMPLOYEE ID'
print(salary)

print("\nInvalid/Missing Entries")
print(salary.isnull())

print("\nFILLING Invalid/Missing Entries")
print(salary.fillna(5000))


salary.plot(marker='X', ms=15,mec='r',mfc='r',color='r',linestyle='--',label='Makers',figsize=(5,5))
plt.xlabel('Employee ID')
plt.ylabel('Salary')
plt.legend(loc='lower center')
plt.show()
```

```
salary.plot.area(color='b',label='Marks',figsize=(5,5))
plt.xlabel('Employee ID')
plt.ylabel('Salary')
plt.legend(loc='lower center')
plt.show()

salary.plot.bar(color='c',label='Marks',figsize=(3,3))
plt.xlabel('Employee ID')
plt.ylabel('Salary')
plt.legend(loc='lower center')
plt.show()

salary.plot.barh(color='c',label='Marks',figsize=(3,3))
plt.xlabel('Employee ID')
plt.ylabel('Salary')
plt.legend(loc='lower center')
plt.show()

salary.plot.box(color='m',label='Employee ID',figsize=(3,3))
plt.ylabel('Salary')
plt.show()

salary.plot.hist(bins=6,figsize=(3,3))
plt.ylabel('Salary')
plt.show()

salary.plot.pie(label='Marks',autopct='%1.1f%%')
plt.ylabel('Salary')
plt.show()
```

```
EMPLOYEE ID
0    70000
1    20000
2    45000
3     5000
4    60000
5     5000
Name: SALARY, dtype: int64

Invalid/Missing Entries
EMPLOYEE ID
0    False
1    False
2    False
3    False
4    False
5    False
Name: SALARY, dtype: bool

FILLING Invalid/Missing Entries
EMPLOYEE ID
0    70000
1    20000
2    45000
3     5000
4    60000
5     5000
Name: SALARY, dtype: int64
```

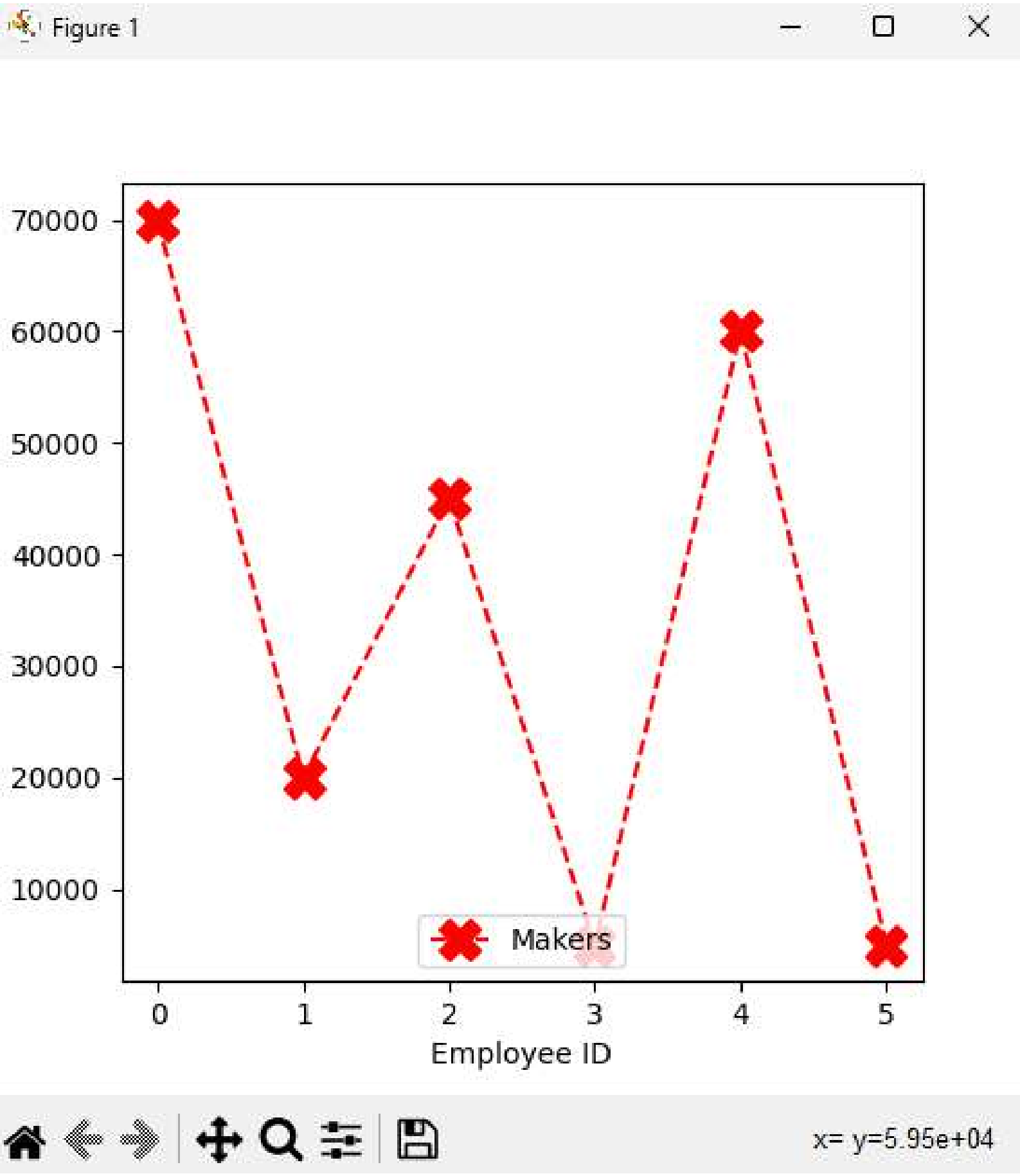
Figure 1
70000
60000
50000
40000
30000
20000
10000
Makers
0
1
2
3
4
5
Employee ID
x= y=5.95e+04

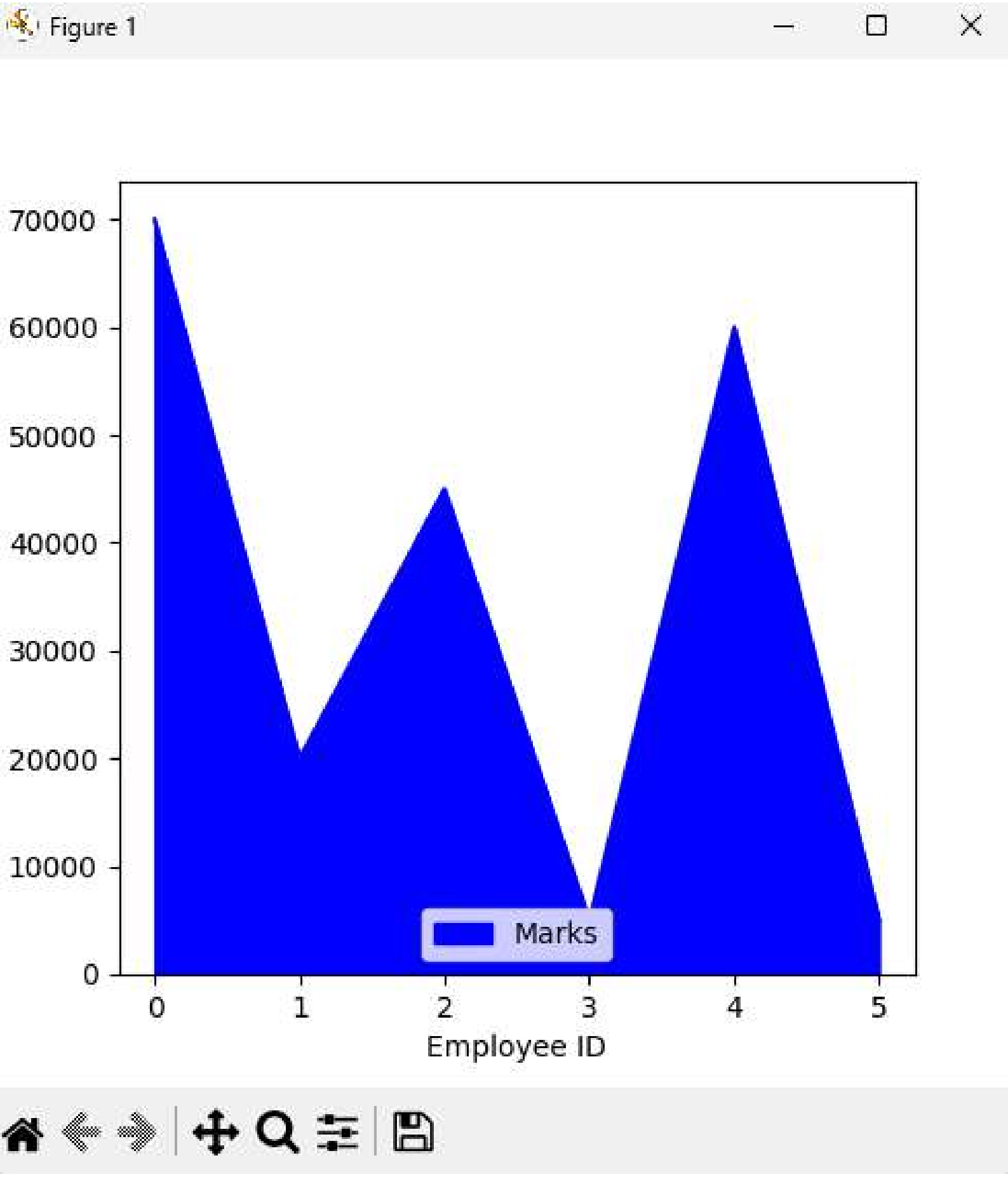
Figure 1
70000
60000
50000
40000
30000
20000
10000
0
0
1
2
3
4
5
Employee ID
Marks

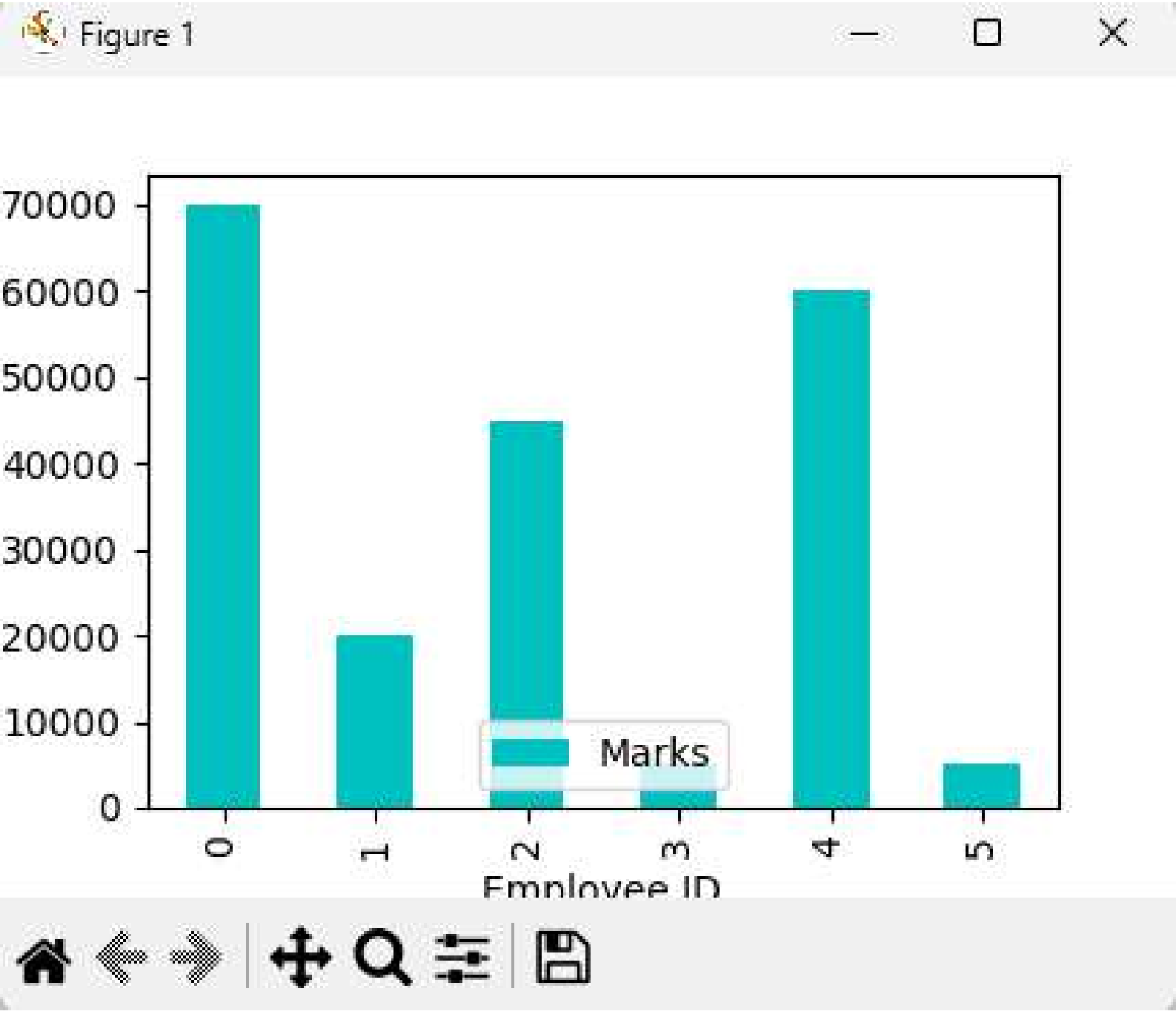
Figure 1
70000
60000
50000
40000
30000
20000
10000
0
Marks
0
1
2
3
4
5
Employee ID

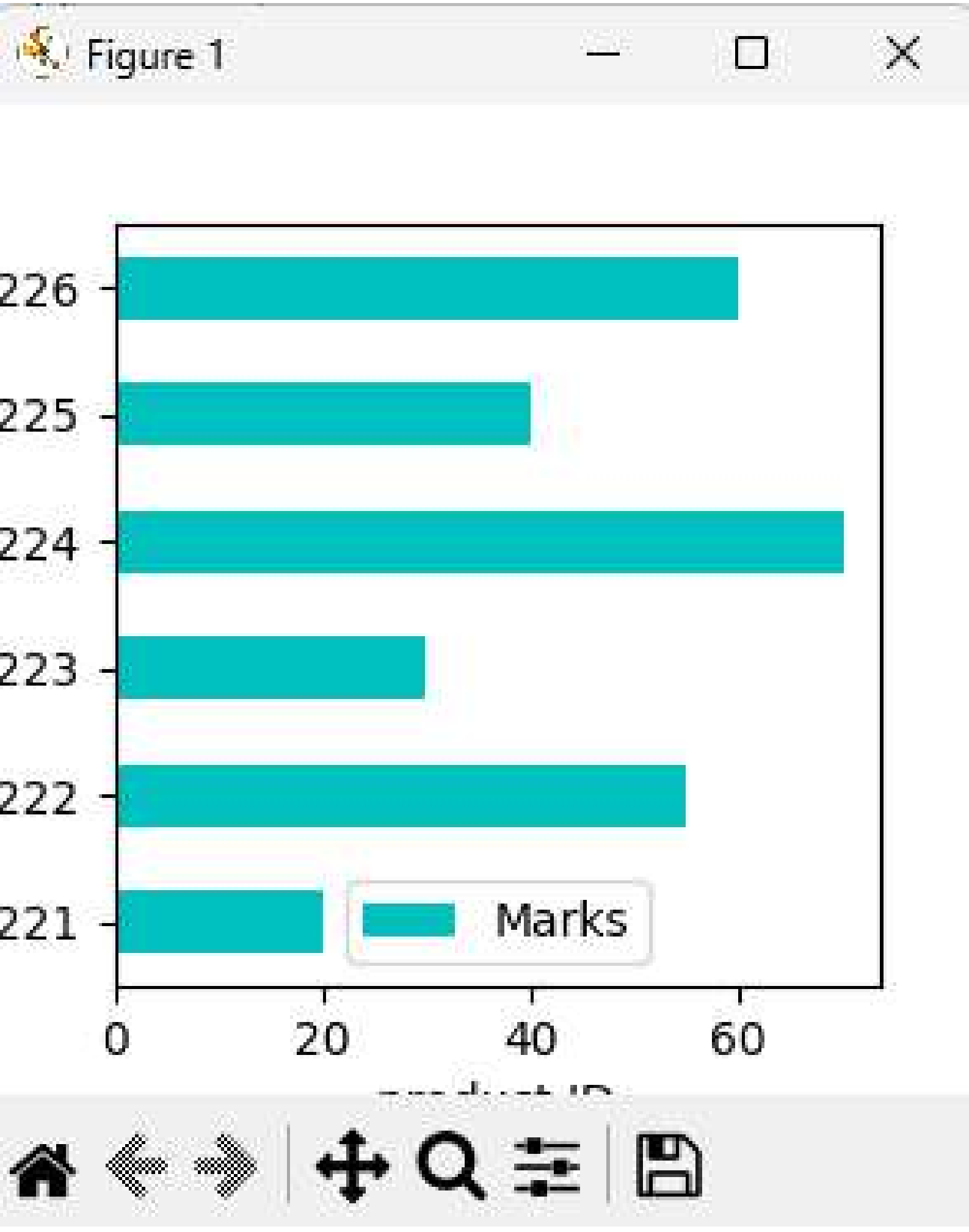
Figure 1
226
225
224
223
222
221
Marks
0
20
40
60

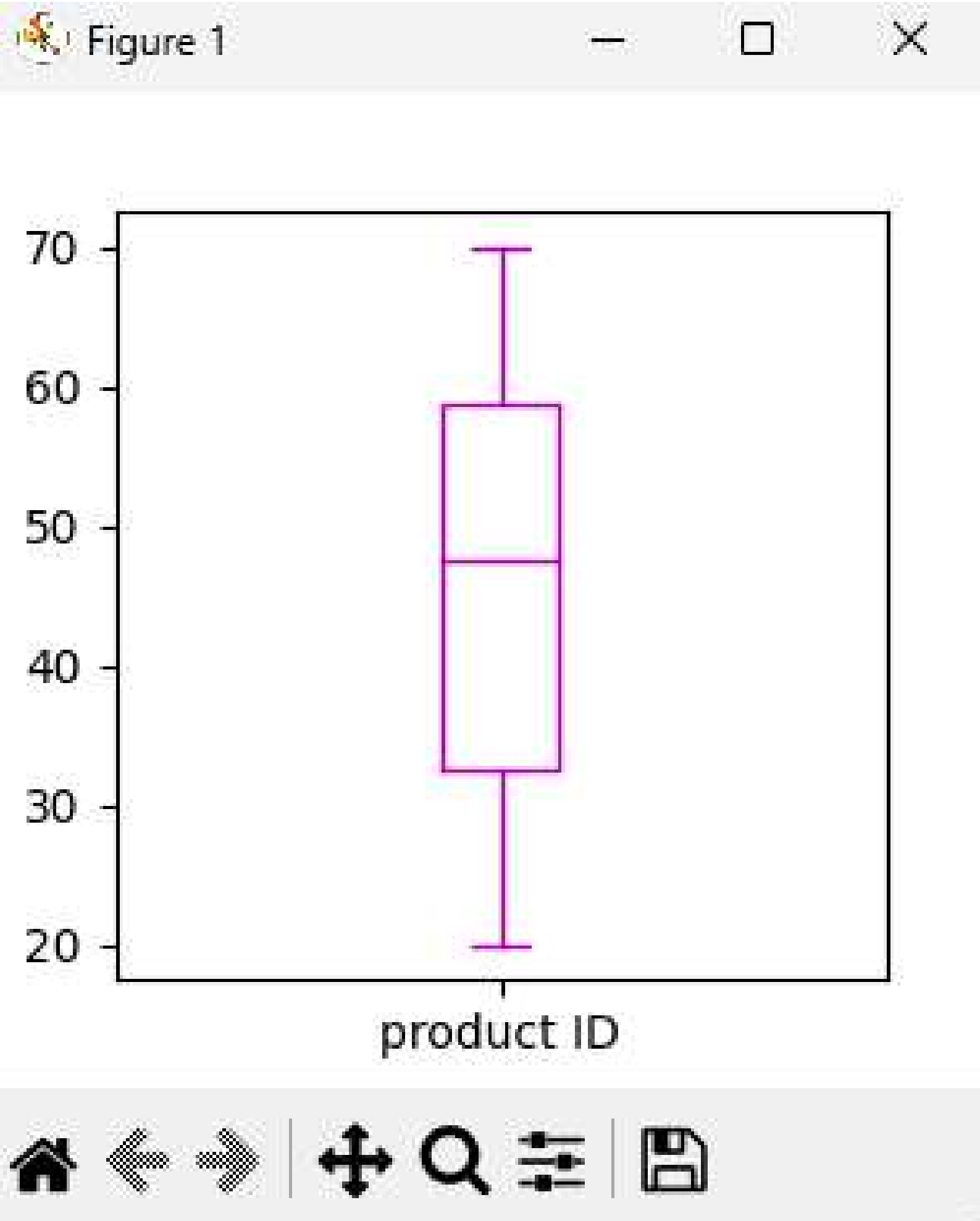
Figure 1
70
60
50
40
30
20
product ID

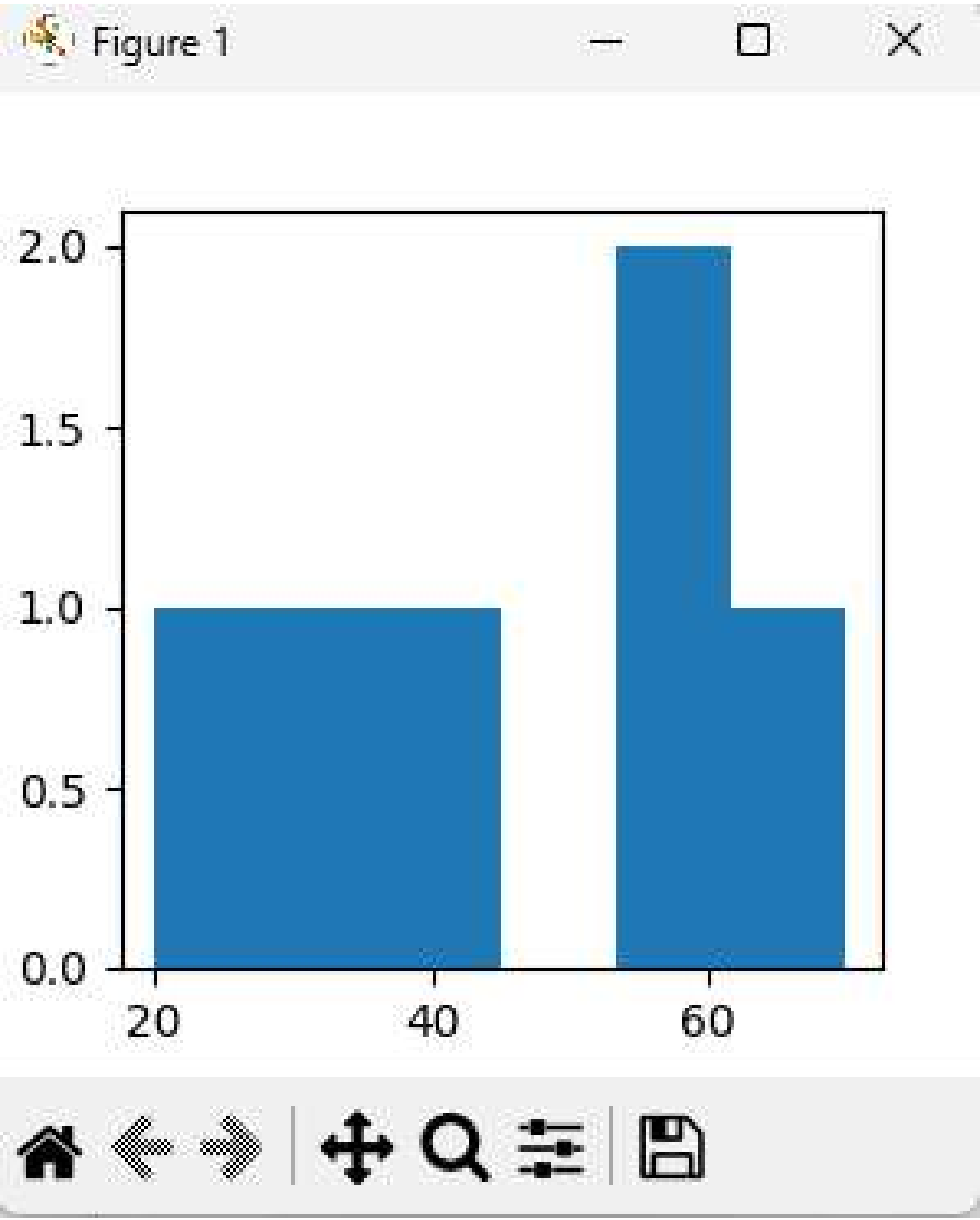
Figure 1
2.0
1.5
1.0
0.5
0.0
20
40
60

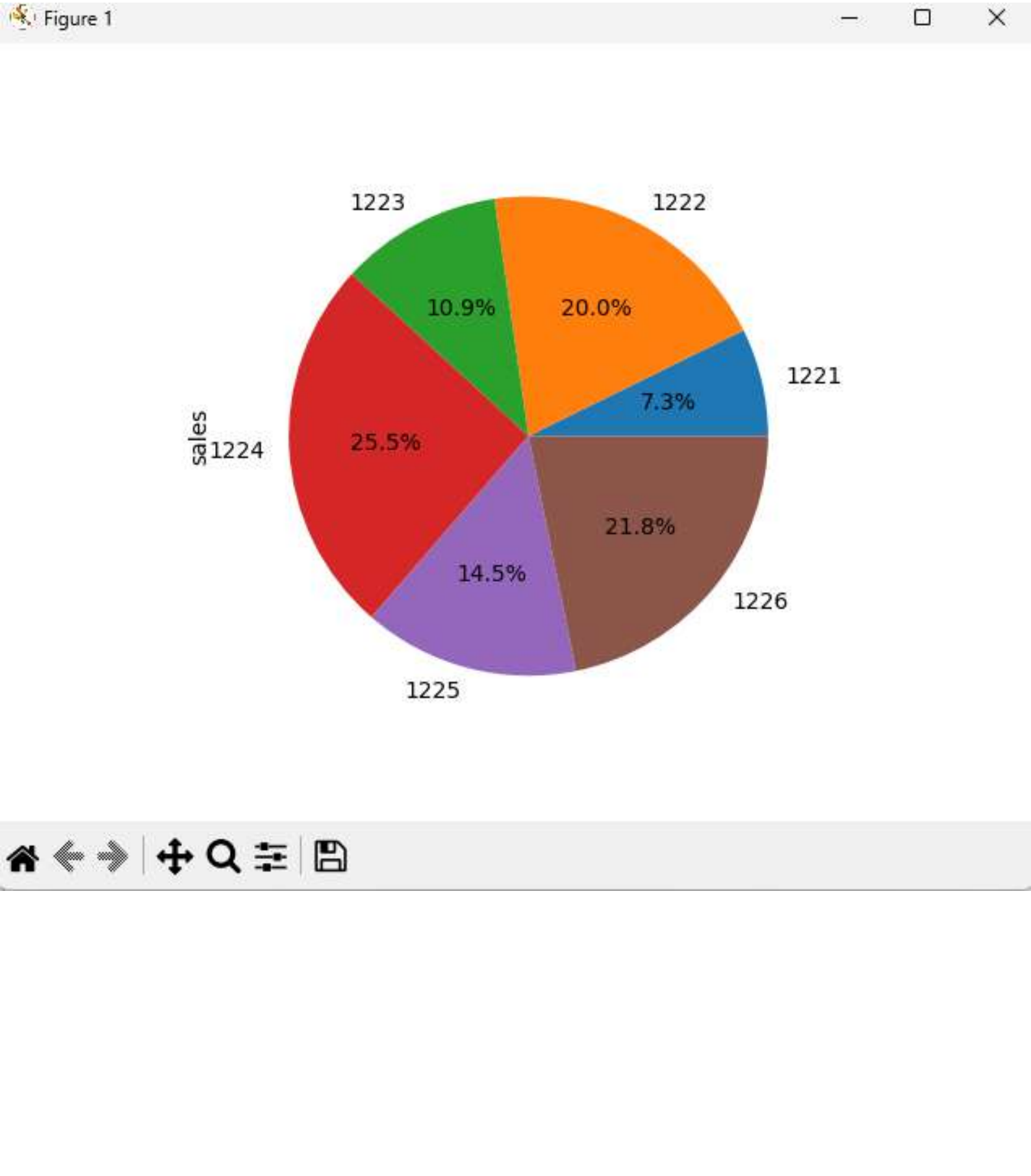
Figure 1
1223
1222
10.9%
20.0%
1221
7.3%
sales
1224
25.5%
21.8%
14.5%
1226
1225