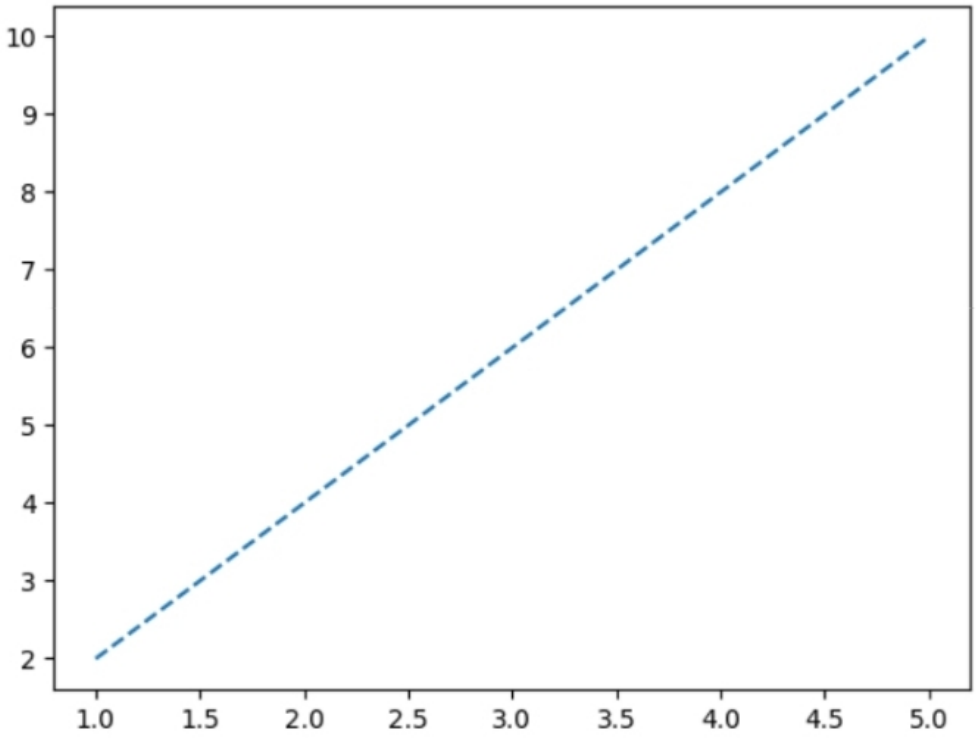
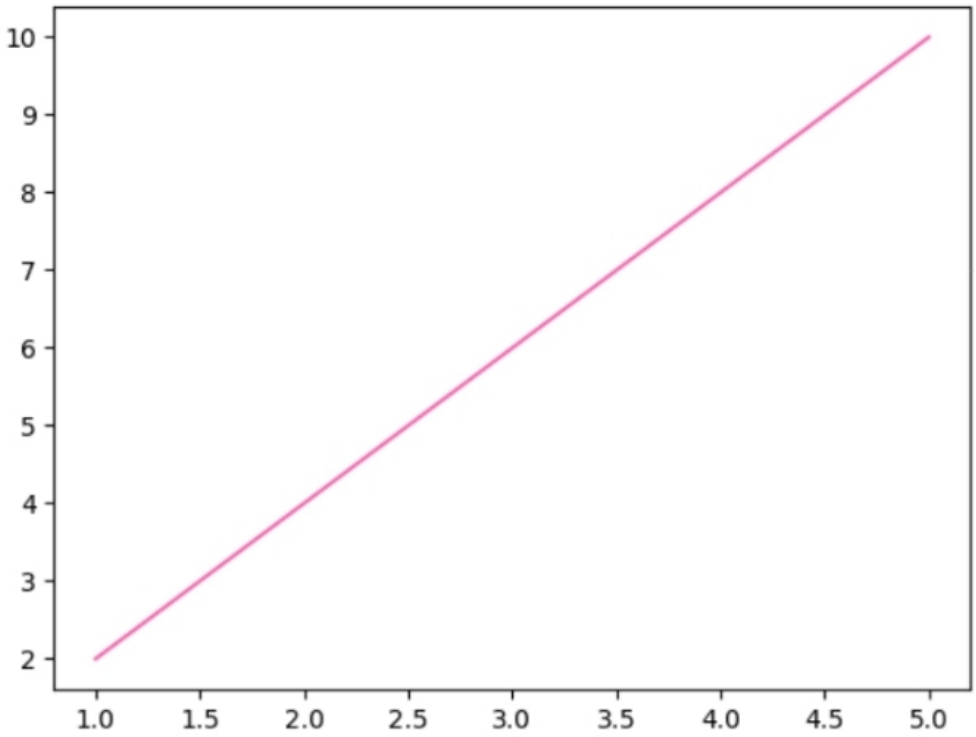
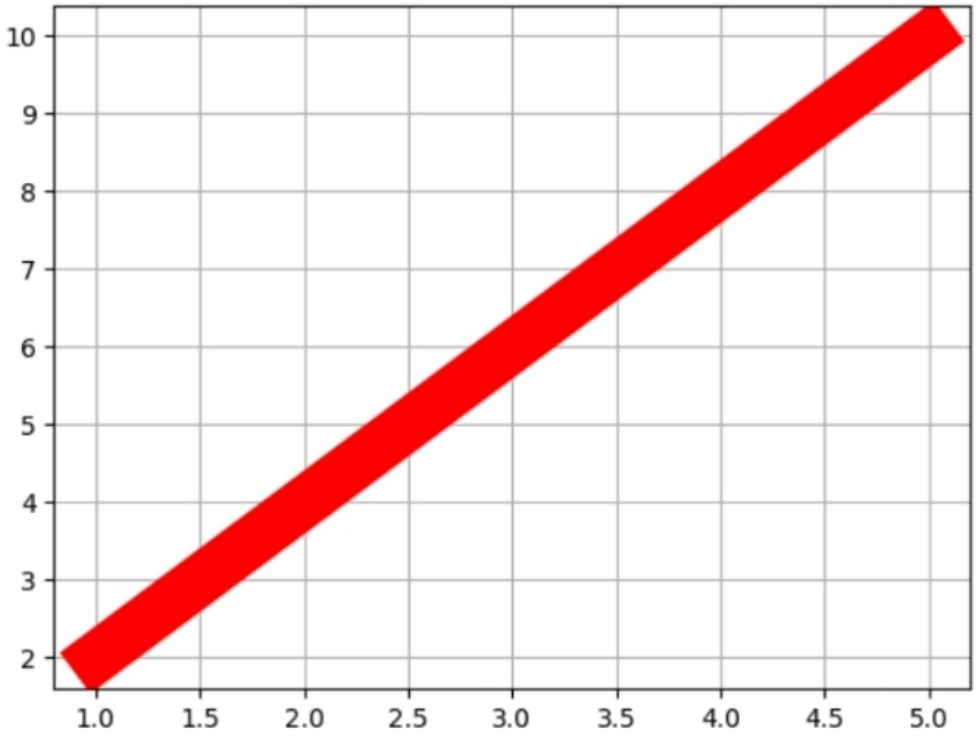
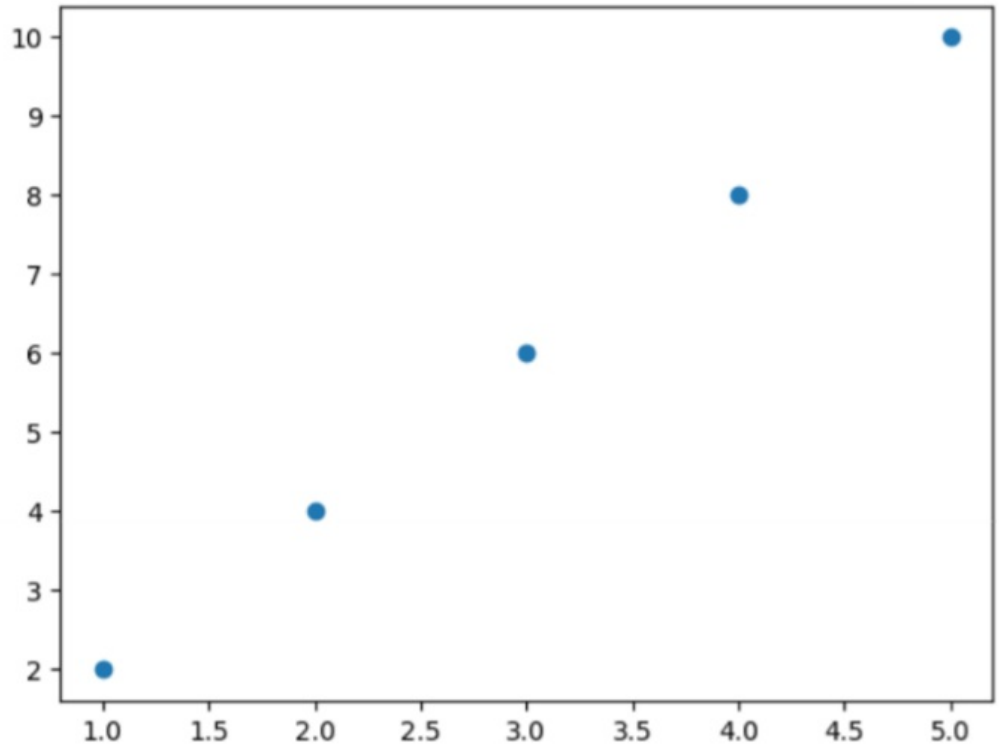
[ ]:
```
plt.plot(x,y,linestyle='dashed')
plt.show()
plt.plot(x,y,'hotpink')
plt.show()
plt.plot(x,y,linewidth='20',color='r')
plt.grid()
plt.show()
plt.scatter(x,y)
plt.show()
```

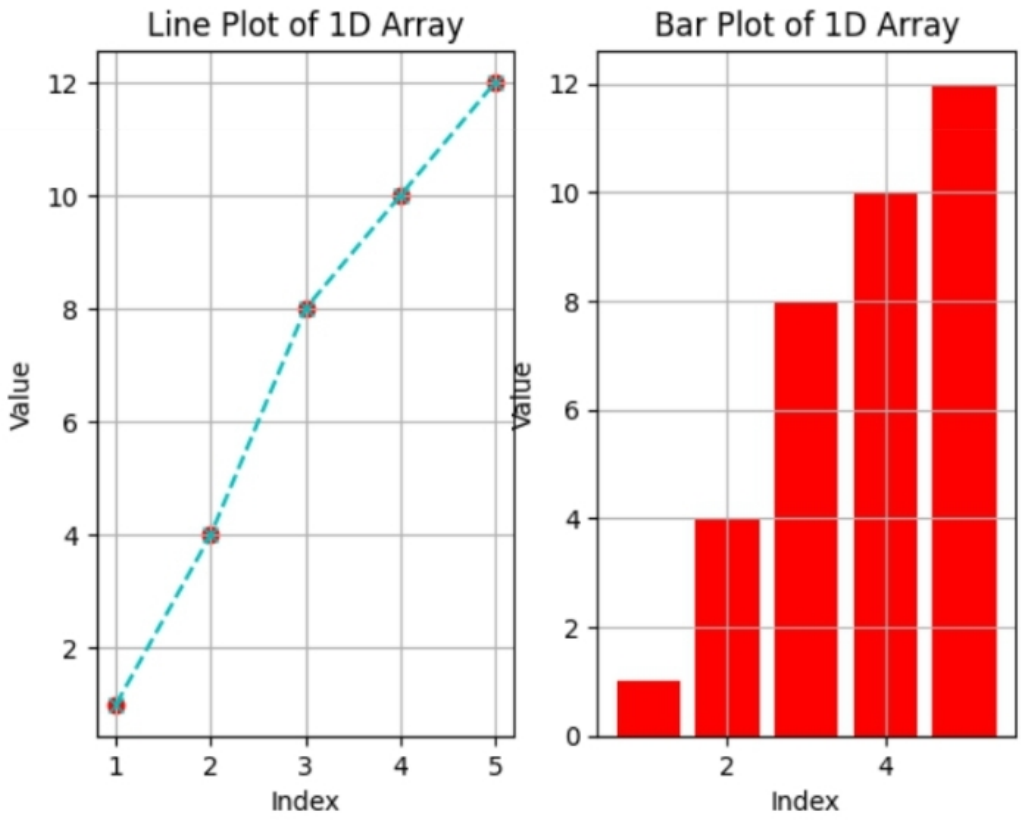



10
9
8
7
6
5
4
3
2
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


10
9
8
7
6
5
4
3
2
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

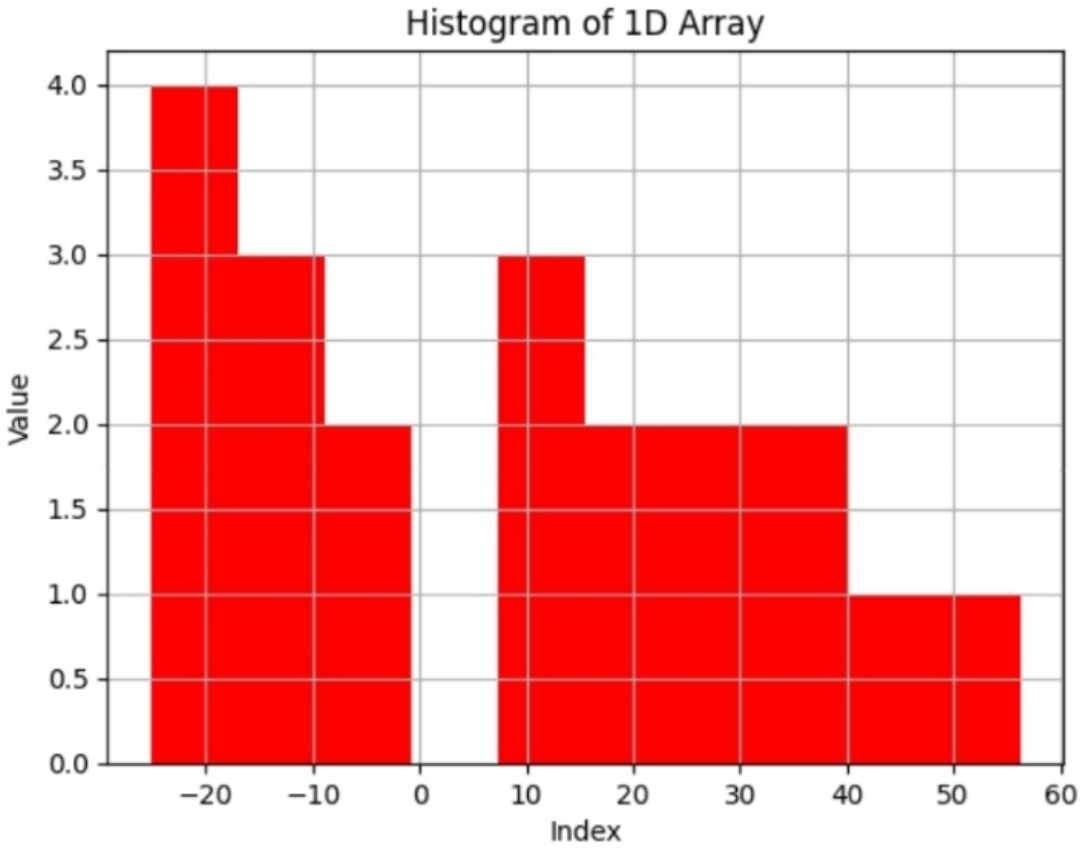


[ ]:
```
import matplotlib.pyplot as plt
import numpy as np
a=np.array([1,2,3,4,5])
b=np.array([1,4,8,10,12])
plt.subplot(1,2,1)
plt.plot(a,b,marker='x',linestyle='dashed',color='c')
plt.grid(True)
plt.scatter(a,b,color='r')
plt.xlabel("Index")
plt.ylabel("Value")
plt.title("Line Plot of 1D Array")
plt.subplot(1,2,2)
plt.bar(a,b,color='r')
plt.grid(True)
plt.xlabel("Index")
plt.ylabel("Value")
plt.title("Bar Plot of 1D Array")
plt.show()
```

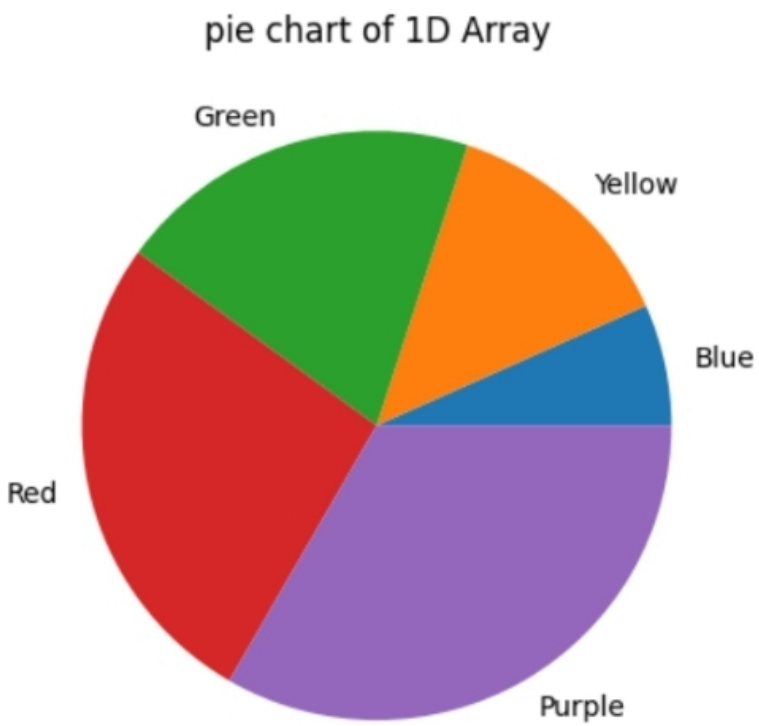


[ ]:
```
e=np.random.normal(10,30,20)
print(e)
plt.hist(e,color='r')
plt.grid(True)
plt.xlabel("Index")
plt.ylabel("Value")
plt.title("Histogram of 1D Array")
plt.show()
```

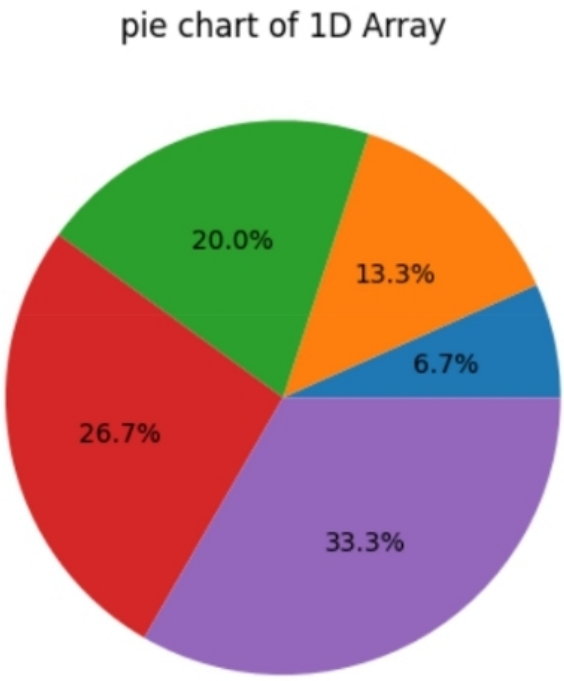
```
[ 20.09932999  25.43011562  56.24606001 -14.12311315  18.15699551
  -9.04304705  24.64913647  -7.37388312   7.74658115  37.94521752
  36.34503627 -19.07623019 -18.94282536 -11.76623775  -3.08199169
 -25.17000888   9.0193486   44.90876525  13.92293299 -24.25308911]
```



[ ]:
```
c=np.array(['Blue','Yellow','Green','Red','Purple'])
plt.pie(a, labels=c)
plt.grid(True)
plt.title("pie chart of 1D Array")
plt.show()
```



[ ]:
```
plt.pie(a,autopct='%1.1f%%')
plt.title("pie chart of 1D Array")
plt.show()
```



EXP NO:8

TIMESERIES

[ ]:
```
import datetime as dt
r=dt.datetime.now()
s=dt.datetime.today()
print(r)
print(s)
```

```
2024-08-22 17:16:43.014071
2024-08-22 17:16:43.014132
```

[ ]:
```
t=r+dt.timedelta(days=1)
o=r-dt.timedelta(days=2)
print(t)
print(o)
```

```
2024-08-22 05:09:47.689781
2024-08-19 05:09:47.689781
```

[ ]:
```
a=dt.datetime(2020,6,8,23,10,25,7264)
print(a)
```

[ ]:
```
import datetime as dt
r=dt.datetime.now()
s=dt.datetime.today()
print(r)
print(s)
```

```
2024-08-22 17:16:43.014071
2024-08-22 17:16:43.014132
```

[ ]:
```
t=r+dt.timedelta(days=1)
o=r-dt.timedelta(days=2)
print(t)
print(o)
```

```
2024-08-22 05:09:47.689781
2024-08-19 05:09:47.689781
```

[ ]:
```
a=dt.datetime(2020,6,8,23,10,25,7264)
print(a)
```



```
2020-06-08 23:10:25.007264
```

[ ]:
```
print(a.replace(day=26))
print(a.replace(month=12))
```

```
2020-06-26 23:10:25.007264
2020-12-08 23:10:25.007264
```

[ ]:
```
print(dt.date(2004,10,1).ctime())
```

```
Fri Oct  1 00:00:00 2004
```

[ ]:
```
print(r.strftime("%Y"))
print(r.strftime("%M"))
print(r.strftime("%b"))
print(r.strftime("%B"))
print(r.strftime("%j"))
print(r.strftime("%D"))
print(r.strftime("%d"))
print(r.strftime("%a"))
print(r.strftime("%A"))
print(r.strftime("%H"))
print(r.strftime("%S"))
print(r.strftime("%F"))
print(r.strftime("%p"))
print(r.strftime("%x"))
print(r.strftime("%X"))
#print(r.strftime("%c"))
#print(r.strftime("%I"))
#print(r.strftime("%m"))
```

```
2024
16
Aug
August
235
08/22/24
22
Thu
Thursday
17
43
2024-08-22
PM
08/22/24
17:16:43
```