SET – 8

Practical: 37

Aim : Draw a graph using pyLab which satisfied following condition.

a) x = range(10)

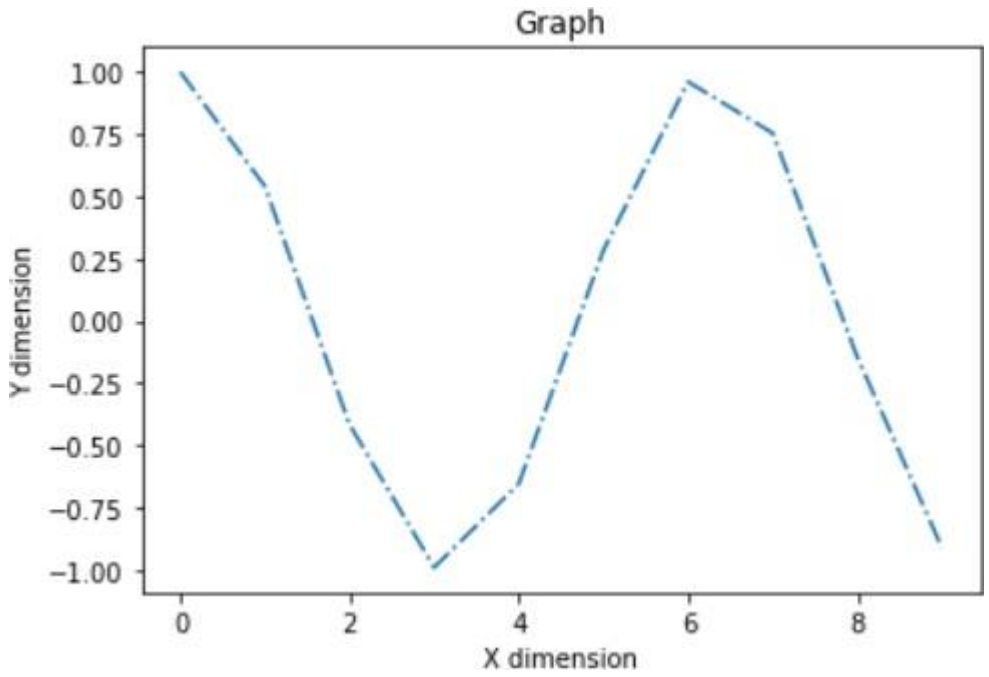
b) y = cos(x)

c) Graph should be “dot-dashed”

Code :

```
import pylab as
p import math
x = list(range(10))
y = list(map((lambda xi:math.cos(xi)),x))
p.xlabel('X dimension')
p.ylabel('Y
dimension')
p.title('Graph')
p.plot(x,y,linestyle='-.')
p.show()
```

Output :



SET – 8

Practical: 38

Aim : Draw a graph using pyLab which satisfied following condition for practical-37.

a) Give the label to x-axis “this is X dimension”

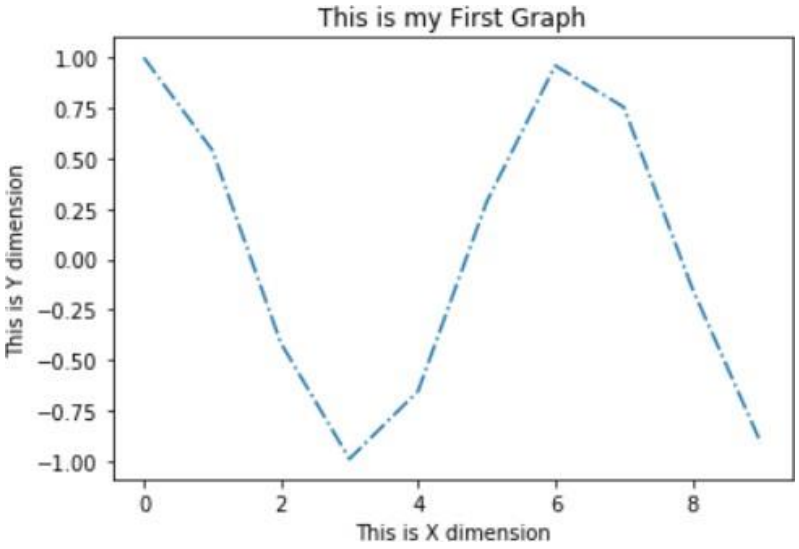
b) Give the label to y-axis “this is Y dimension”

c) Give the Title to graph “This is My First Graph”

Code :

```
import pylab as
p import math
x = list(range(10))
y = list(map((lambda xi:math.cos(xi)),x))
p.xlabel('This is X dimension')
p.ylabel('This is Y dimension') p.title('This
is my First Graph') p.plot(x,y,linestyle='-.')
p.show()
```

Output :



SET – 8

Practical: 39

Aim : Draw a graph using pyLab which satisfied following condition for practical-38.

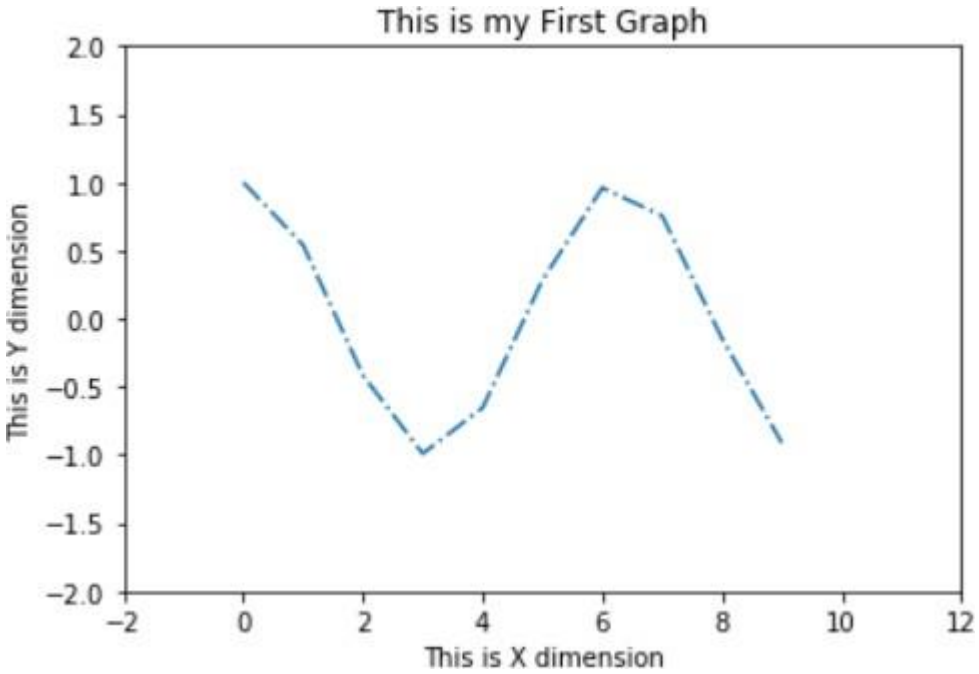
a) Give the limit to x-axis (-2,12)

b) Give the limit to y-axis (-2,2)

Code :

```
import pylab as p
import math
x = list(range(10))
y = list(map((lambda xi:math.cos(xi)),x))
p.xlabel('This is X dimension')
p.ylabel('This is Y dimension')
p.title('This is my First Graph')
p.xlim(-2,12)
p.ylim(-2,2)
p.plot(x,y,linestyle='-.')
p.show()
```

Output :



SET – 8

Practical: 40

Aim : Write a python program to do line plotting, scatter plotting, histogram and pie chart.

Code :

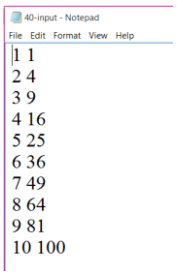
```
import pylab as p
import numpy as n
data = n.loadtxt('40-input.txt')
p.plot(data[:,0],data[:,1],linestyle=':',color='m',marker='h')
p.xticks([1,2,3,4,5,6,7,8,9,10])
p.yticks([1,4,9,16,25,36,49,64,81,100])
p.show()
p.scatter(data[:,0],data[:,1],s=80,marker='s',color='c')
p.xticks([1,2,3,4,5,6,7,8,9,10])
p.yticks([1,4,9,16,25,36,49,64,81,100])
p.show()

age=[11,12,12,12,15,21,22,23,24,25,27,28,29,28,27,31,32,33,41,42,45,46,47,
40,50,59,57,66,55]
bins=[10,20,30,40,50,60]
p.hist(age,bins,histtype='bar',rwidth=0.8,color='g') p.show()

labels=['AI','Python Programming','Project','DM']
pages=[450,350,350,500]
colors=['Red','yellow','Green','LightCoral']
explode=(0.1,0,0,0)
p.pie(pages,explode=explode,labels=labels,colors=colors,startangle=90,
shadow=True,autopct='%1.1f%%')
p.legend(labels,loc='upper right')
p.show()
```

Output :

40-input.txt:



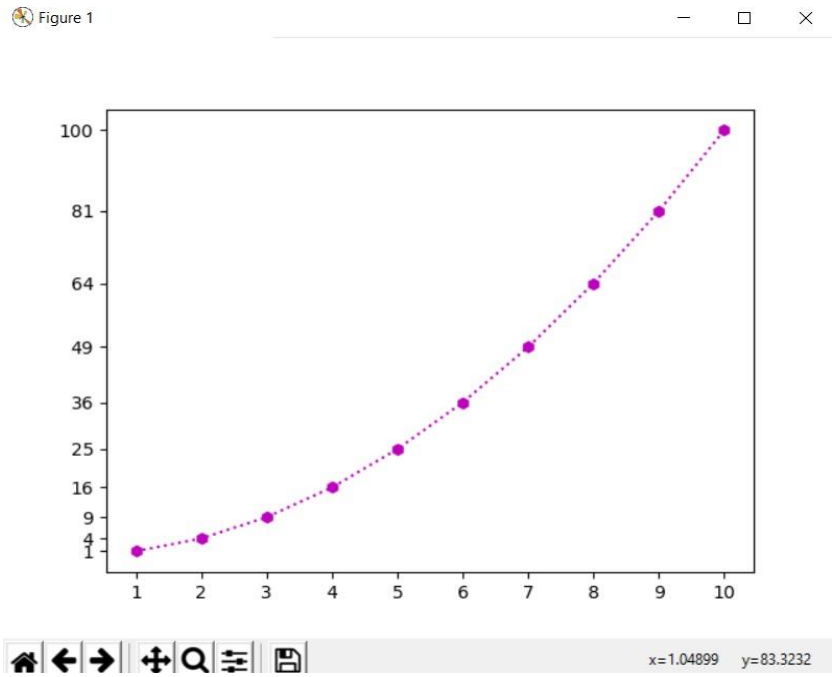


Figure 1
100
81
64
49
36
25
16
9
4
1
1 2 3 4 5 6 7 8 9 10
x=1.04899 y=83.3232

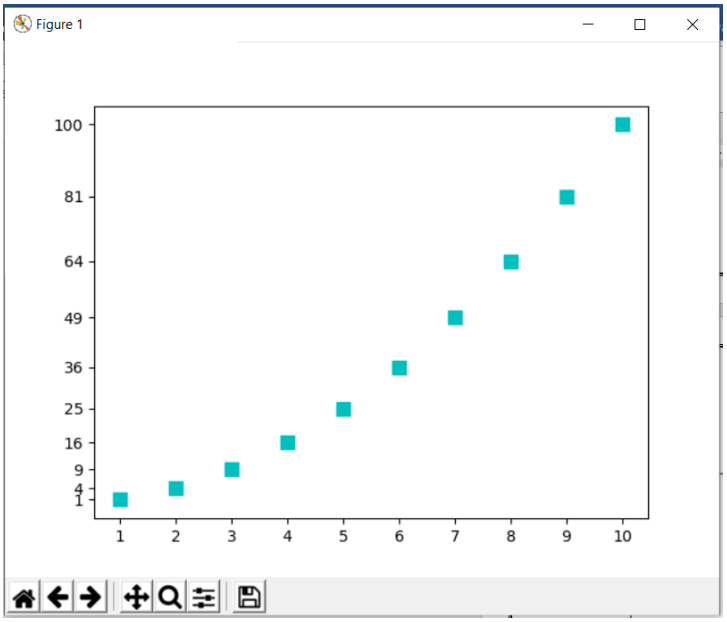


Figure 1
100
81
64
49
36
25
16
9
4
1
1 2 3 4 5 6 7 8 9 10