PyPlot Assignment

```
import numpy as np
import matplotlib.pyplot as p1
```

Plot Line

```
x=np.arange(7)
y=np.arange(1,20,3)
print(x)
print(y)
p1.plot(x,y)
p1.show()
#******************
x=np.arange(7)
y=np.arange(1,20,3)
print(x)
print(y)
p1.xlabel("Data from list x")
p1.ylabel("Data from list y")
p1.title("My PyPlot 1")
p1.plot(x,y)
p1.show()
#******************
x=[ 1,2,3, 4,5, 6,7, 8, 9,10]
y=[13,7,2,11,0,17,1,11,22,14]
print(x)
print(y)
p1.xlabel("Overs")
p1.ylabel("Score")
p1.title("IPL 2019")
p1.plot(x,y)
p1.show()
#******************
x=[1,2,3,4,5,6,7,8,9,10]
y=[13,7,2,11,0,17,1,11,22,14]
print(x)
print(y)
p1.xlabel("Overs")
p1.ylabel("Score")
p1.title("IPL 2019")
p1.plot(x,y,'y')
p1.plot(x,y,"r^")
p1.show()
#******************
x=[ 1,2,3, 4,5, 6,7, 8, 9,10]
y=[13,7,2,11,0,17,1,11,22,14]
print(x)
print(y)
p1.xlabel("Overs")
p1.ylabel("Score")
p1.title("IPL 2019")
p1.plot(x,y)
p1.plot(x,y,"ro")
#Player out
p1.plot([4],[11],"b^")
p1.show()
#******************
a=np.arange(0,10,0.1)
x=np.cos(a)
y=np.sin(a)
print(x)
print(y)
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.plot(a,x,'b',linewidth=10)
p1.plot(a,y,'r',linewidth=2)
p1.show()
#******************
a=np.arange(0,10,0.1)
x=np.cos(a)
y=np.sin(a)
print(x)
print(y)
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.plot(a,x,'b',linewidth=5,linestyle='
dashed')#
dashed,solid,dashdot,dotted
p1.plot(a,y,'r',linewidth=2)
p1.show()
#******************
a=np.arange(0,10,0.1)
x=np.cos(a)
y=np.sin(a)
print(x)
print(y)
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.plot(a,x,'b',linewidth=5,linestyle=':
')# '-', '--', '-.', ':'
p1.plot(a,y,'r',linewidth=2)
p1.show()
#******************
a=np.arange(0,10,0.1)
x=np.cos(a)
y=np.sin(a)
print(x)
print(y)
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.plot(x, y, 'go--', linewidth=2,
markersize=12)
p1.show()
```

Bar Chart

```
p1.bar([1,2,3,4,5],[6,7,8,9,10])
p1.show()
#**********************
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y)
p1.savefig("data.pdf")
p1.show()
#**********************
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y,width=0.3)#width=0.1 to 0.9
p1.show()
#**********************
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y,width=0.3,color="red")#width
=0.1 to 0.9
p1.show()
#**********************
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y,width=[0.3,0.2,0.4,0.1,0.5],col
or="red")#width=0.1 to 0.9
p1.show()
#**********************
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y,width=[0.3,0.2,0.4,0.1,0.5],col
or=["red","black","b","g","y",])#width=0.
1 to 0.9
p1.show()
#**********************
x=np.arange(0,10,2)
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x,y,width=0.2,color="b")
p1.bar(x+0.3,y,width=0.2,color="r")
p1.show()
#**********************
x=np.arange(4)
v=[[6,7,8,9],[5,6,7,8],[7,8,9,10]]
p1.xlabel("DATA FROM A")
```

```
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.bar(x+0.00,v[0],width=0.2,color="y")
p1.bar(x+0.25,v[1],width=0.2,color="b")
p1.bar(x+0.50,v[2],width=0.2,color="r")
p1.show()
#**********************
x=np.arange(4)
v=[[6,7,8,9],[5,6,7,8],[7,8,9,10]]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.barh(x+0.00,v[0],width=0.2,color="y")
p1.barh(x+0.25,v[1],width=0.2,color="b")
p1.barh(x+0.50,v[2],width=0.2,color="r")
p1.show()
#**********************
x=np.arange(4)
v=[6,7,8,9]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.barh(x,v,color="y")
p1.show()
```

Pie Chart

```
x=np.arange(10,100,20)
L=["A","B","C","D","E"]
p1.title("DATA ALL")
p1.pie(x,labels=L)
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=['red','black',
'pink','yellow','silver'])
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor)
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor,auto
pct="%3d%%")
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor,auto
pct="%03d%%")
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor,auto
pct="%05.3f%%")
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor,auto
pct="%05.3f%%",explode=[0,0.2,0,0.
1,0])
p1.show()
#**********************
x=np.arange(10,100,20)
print(x)
L=["Python","PHP","CSS","C++","H
TML"]
mcolor=['red','black','pink','yellow','sil
ver']
myex=[0,0.2,0,0.1,0]
p1.title("DATA ALL")
p1.pie(x,labels=L,colors=mcolor,auto
pct="%05.3f%%",explode=myex)
p1.show()
#**********************
x=range(4)
y=[5.0,25.0,45.0,20.0]
p1.title("DATA ALL")
p1.xlim(-4.0,1.0)
p1.bar(x,y,color='r')
p1.show()
#**********************
import matplotlib.pyplot as p
p.plot([1,7,3,8,10],[2,4,6,8,20],'y-')
p.plot([1,7,3,8,10],[2,4,6,8,20],'g^')
p.ylabel('Y Range')
p.xlabel('X Range')
p.title("First Plot")
p.show()
#**********************
import matplotlib.pyplot as plt
x=[1,2,3,4,5]
y=[10,16,3,9,30]
plt.plot(x, y,'r-')
plt.plot(x, y)
plt.title('My PyPlot')
plt.grid(True)
plt.show()
#**********************
import matplotlib.pyplot as p
p.plot([1,7,3,8],[2,4,6,8],'k--')
p.ylabel('Y RANGE')
p.xlabel('X RANGE')
p.title("FIRST PLOT")
p.show()
#**********************
import matplotlib.pyplot as p

x=[i for i in range(10)]
y=[i*2 for i in x]
p.plot(x,y,'k--')
p.plot(x,y,'go')
p.ylabel('Y RANGE')
p.xlabel('X RANGE')
p.title("FIRST PLOT")
p.show()
#**********************
import matplotlib.pyplot as p
x=[i for i in range(10)]
y=[i*2 for i in x]
p.plot(x,y,'k--')
p.plot(x,y,'go')
p.ylabel('Y RANGE')
p.xlabel('X RANGE')
p.title("THIRD PLOT")
p.show()
#**********************
import matplotlib.pyplot as p
p.plot([1,7,3,8],[2,4,6,8],'yo')
p.plot([1,7,3,8],[2,4,6,8],'r-')
p.ylabel('Y RANGE')
p.xlabel('X RANGE')
p.title("FIRST PLOT")
p.show()
#**********************
import matplotlib.pyplot as p
p.plot([1,7,3,8],[2,4,6,8],'r--')
p.plot([1,7,3,8],[2,4,6,8],'g^')
p.ylabel('Y RANGE')
p.xlabel('X RANGE')
p.title("FIRST PLOT")
p.show()
#**********************
import matplotlib.pyplot as plt
x = [0, 1, 2, 1]
y = [1, 2, 1, 0]
fig, ax = plt.subplots()
ax.fill(x, y,'r')
plt.show()
```

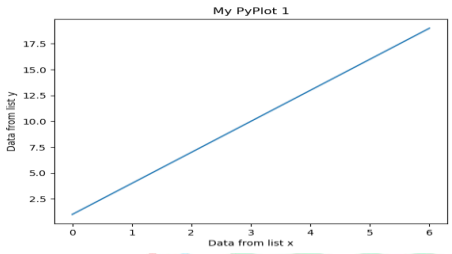
Save And Extra

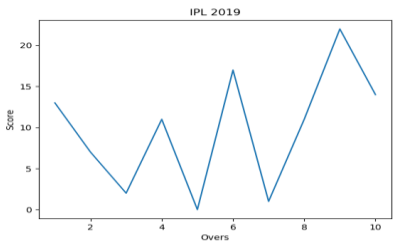
```
x=[1,2,3,4,5]
y=[6,7,8,9,10]
p1.xlabel("DATA FROM A")
p1.ylabel("DATA FROM B")
p1.title("DATA ALL")
p1.grid(True,color="r")
fig = p1.figure()
fig.patch.set_facecolor('xkcd:mint
green')
```

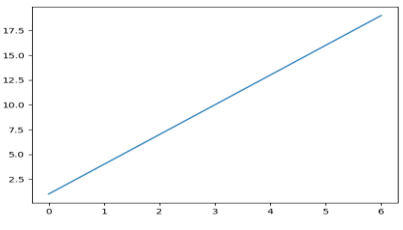
```
ax = p1.gca()
ax.set_facecolor('xkcd:black')
ax.set_facecolor(("cyan"))#.0, .0, .0#pink
p1.bar(x,y,color=['r','y','g','b'],label="range 1")
p1.legend(loc="upper left")
p1.savefig("data.pdf")
p1.savefig("c:\\python\\data.pdf")
p1.savefig("c:\\python\\data.png")
p1.show()
#**********************
x=[ 1,2,3, 4,5,6, 6,7,8, 8, 9,10]
y=[13,7,2,11,0,3,17,1,5,11,22,14]
print(x)
print(y)
p1.style.use('r')#dark_background
p1.xlabel("Overs",color="red")
p1.ylabel("Score",color="blue")
p1.title("IPL 2019")
p1.plot(x,y,'black')
fig = p1.figure()
fig.patch.set_facecolor('xkcd:mint green')
p1.grid(True,color="b")
p1.plot(5,0,"r^")
p1.plot([5,6,6,7,8],[0,3,17,1,5],"r")
p1.plot(8,5,"bo")
p1.plot(6,3,"ro")
p1.savefig("my pi chart .jpeg")
p1.show()
#**********************
import matplotlib.pyplot as p
l1=list()
for i in range(1,50):
    **********************
    if i%3==0:
        l1.append(i+50)
    else:
        l1.append(i-5)
print(l1)
l2=list()
for i in range(1,50):
    if i%3==0:
        l2.append(i+10)
    else:
        l2.append(i-10)
print(l2)
p.plot([1,2,3],[1,2,33,'bo')
#p.plot(l1,l1)
p.ylabel('Y Range')
p.xlabel('X Range')
p.title("First Plot")
p.show()
```

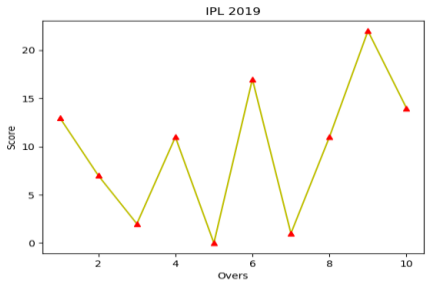
OUTPUT

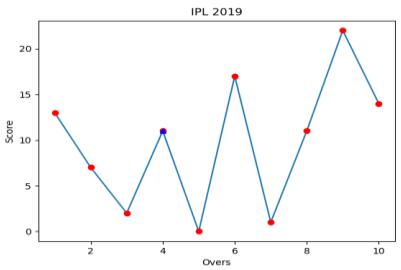
PLOT:

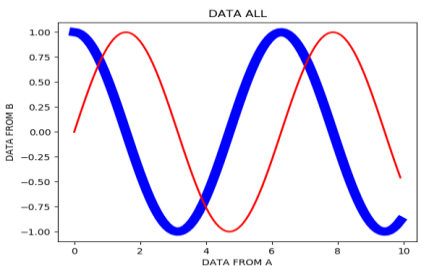


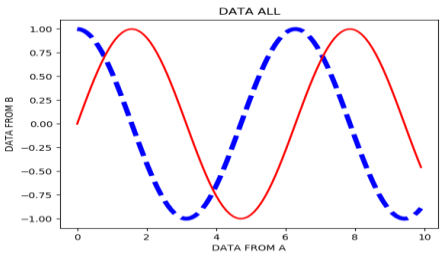


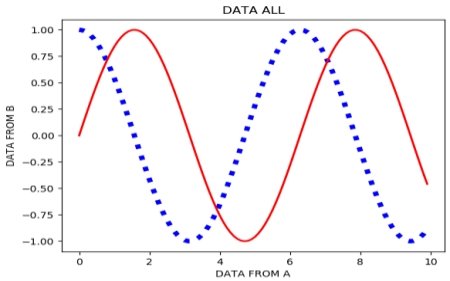


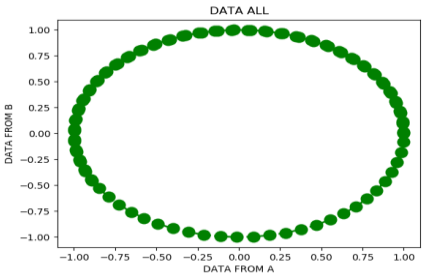




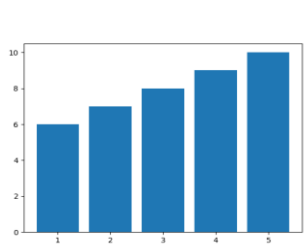


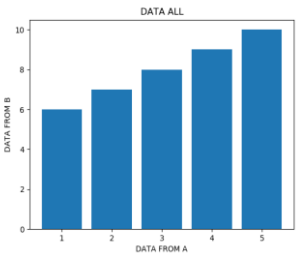


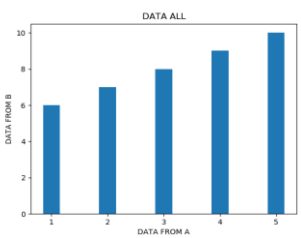


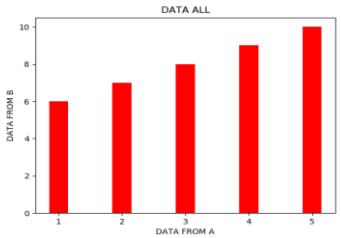


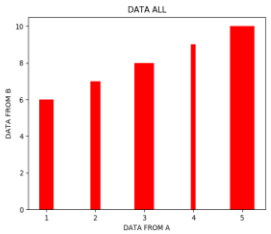
BAR:

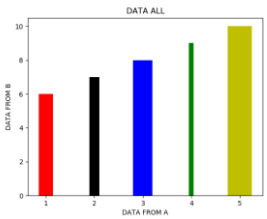


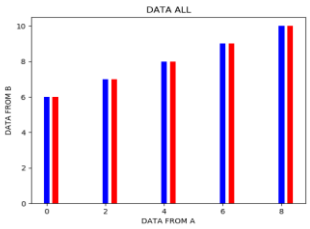


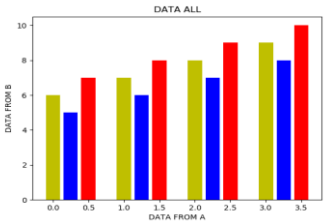




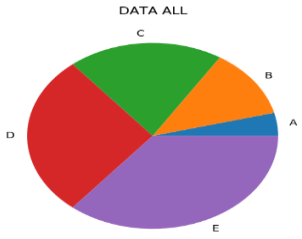


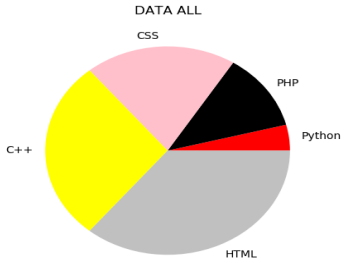


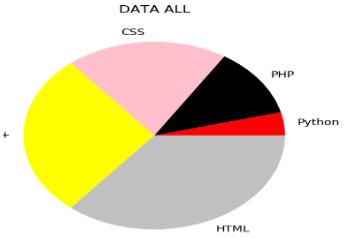


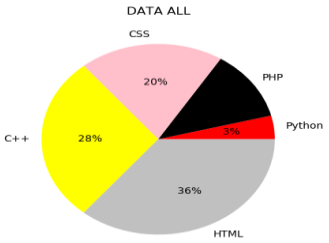


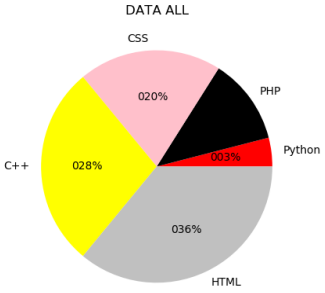
PIE:

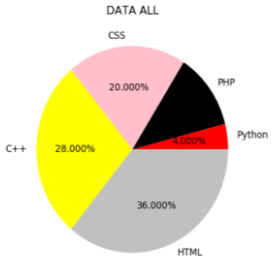


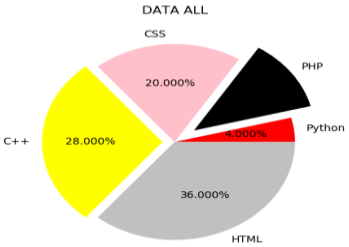


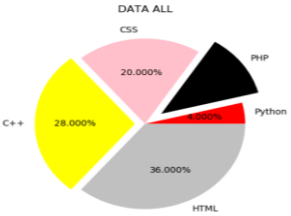


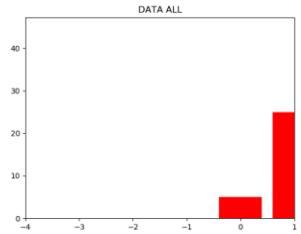


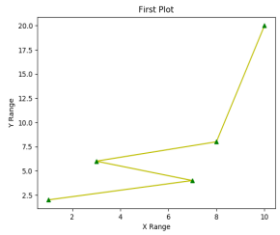


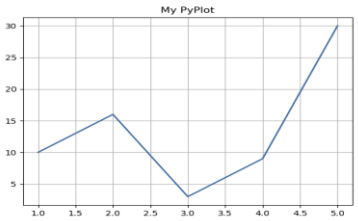


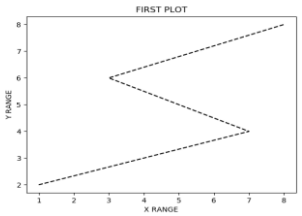


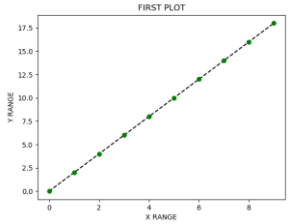


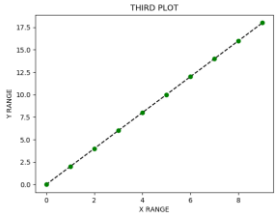


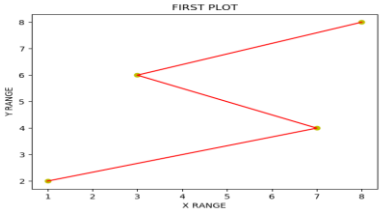


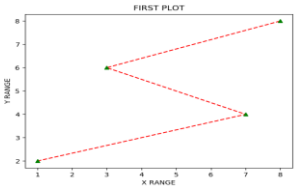


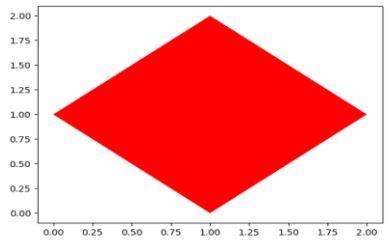












SAVE AND EXTRA