

**Madhav Institute of Technology and Science, Gwalior-474005**

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

## **DEPARTMENT OF INFORMATION TECHNOLOGY**



**FINISHING SCHOOL PROGRAM (Online Internship) - 2021**

**DATA SCIENCE FOR BEGINNERS**

**ASSIGNMENT-3**

**SUBMITTED TO:**

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**SUBMITTED BY:**

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IT 3<sup>RD</sup> Year (6<sup>TH</sup> Sem)

Q.1 WAP to show different attributes of grid.

**CODE:-**

```
import matplotlib.pyplot as mpl

print('NEERAJ GOPAL VERMA-0901IT181038\n') #user details

#raw data
planets = ['Jupiter','Saturn','Uranus','Neptune']
distance = [4.2,8.52,18.21,29.09]

#graph plot
mpl.plot(planets,distance,linewidth =2,color = 'black')

#set chart title and label axes
mpl.title('Distance between Earth and:',fontsize = 18)
mpl.xlabel('Planets',fontsize = 16)
mpl.ylabel('Distance(in AU)',fontsize = 16)

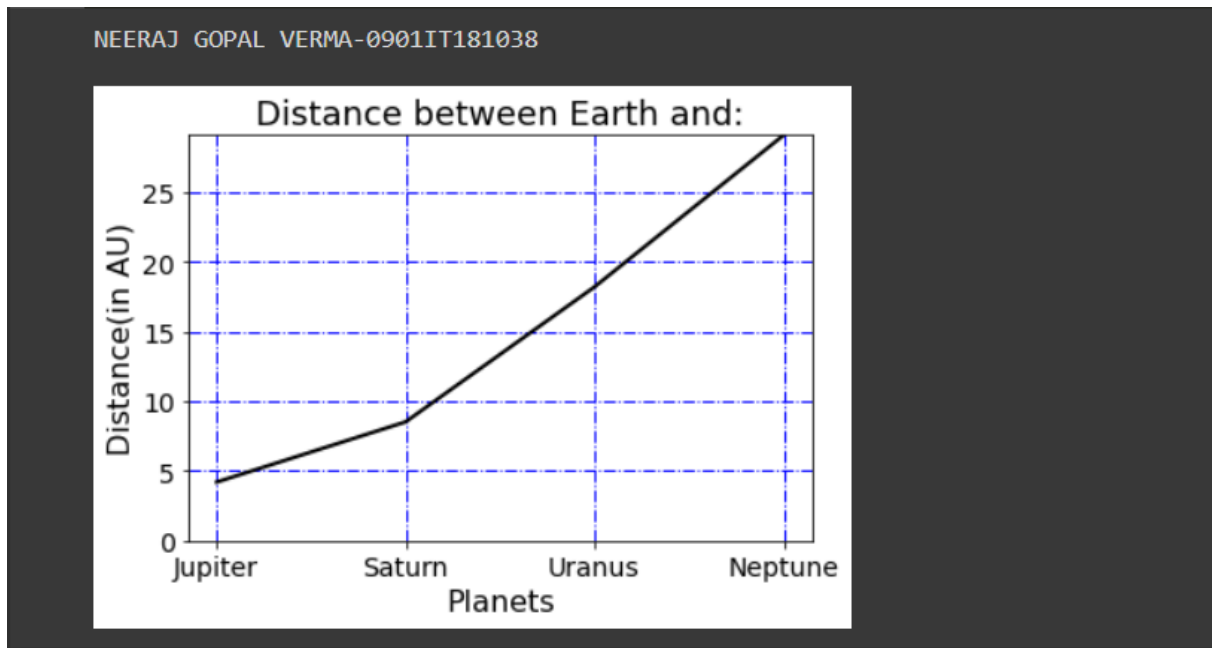
#set limits of axes
mpl.ylim(0,29.09)

#set size of tick labels
mpl.tick_params(labelsize = 14)

#set grid parameters
mpl.grid(color = 'blue',linewidth = 1,linestyle = '-.')

mpl.show()
```

## OUTPUT:-



Q.2 WAP to Subplot two or more graphs horizontally.

## CODE:-

```
import matplotlib.pyplot as mpl
```

```
print('NEERAJ GOPAL VERMA-0901IT181038\n') #user details
```

```
#FIRST PLOT:
```

```
x = [1, 2, 3,4]
```

```
y = [1,2,3,4]
```

```
mpl.subplot(3,1,1)
```

```
mpl.title("1st")
```

```
mpl.plot(x,y)
```

```
#SECOND PLOT:
```

```
x = [1, 2, 3,4]
y = [1,4,9,16]
```

```
mpl.subplot(3,1,2)
mpl.title("2nd")
mpl.plot(x,y)
```

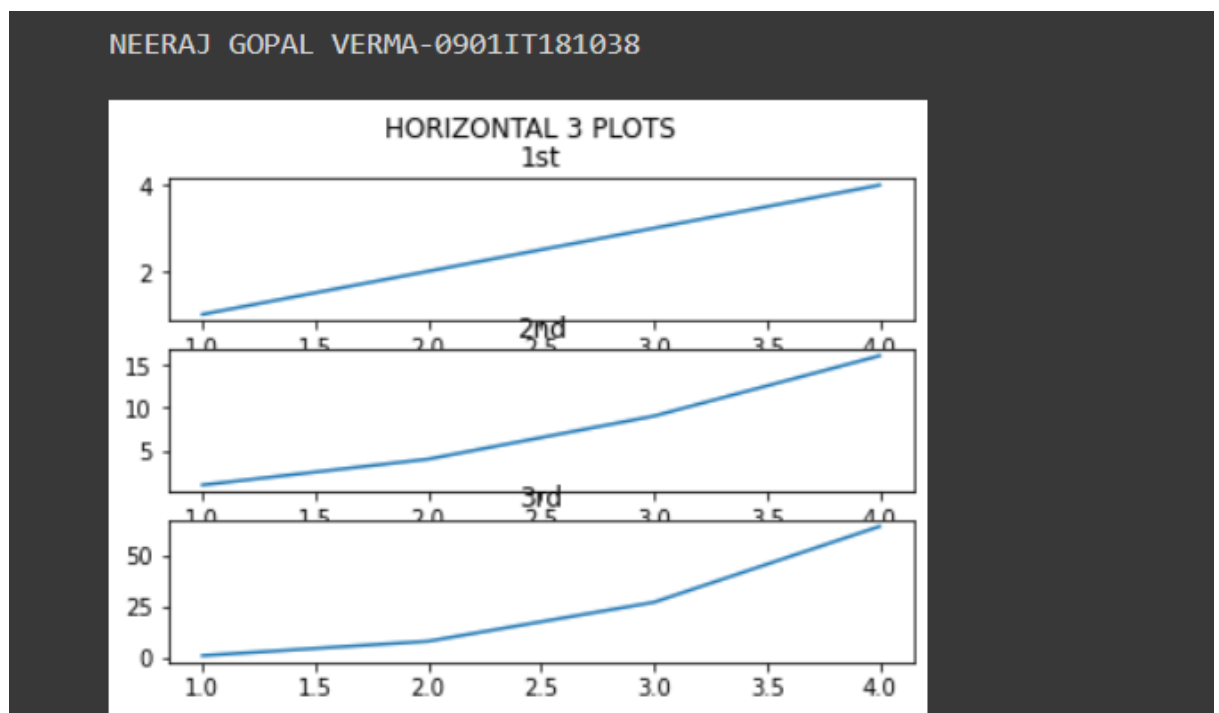
#THIRD PLOT:

```
x = [1,2,3,4]
y = [1,8,27,64]
```

```
mpl.subplot(3,1,3)
mpl.title("3rd")
mpl.plot(x,y)
```

```
mpl.suptitle("HORIZONTAL 3 PLOTS")
mpl.show()
```

## OUTPUT:-



Q.3 WAP to Plot the first five cubic numbers, and then plot the first 5000 cubic numbers. Using scatter plot with colormap.

**CODE:-**

```
import matplotlib.pyplot as mpl

print('NEERAJ GOPAL VERMA-0901IT181038\n') #user details

num = [i for i in range(1,6)]
cubes = [i**3 for i in range(1,6)]
colours = [i for i in range(1,6)]
mpl.scatter(num,cubes,c = colours,cmap = 'Blues')

mpl.show()

num = [i for i in range(1,5001)]
cubes = [i**3 for i in range(1,5001)]
colours = [i for i in range(1,5001)]
mpl.scatter(num,cubes,c = colours,cmap = 'Reds')

mpl.show()
```

## OUTPUT:-

NEERAJ GOPAL VERMA-0901IT181038

