In [17]:
```
!pip install chart_studio
!pip install cufflinks
!pip install plotly
```

```
Requirement already satisfied: chart_studio in c:\users\bguru\anaconda3\lib\site-pack
ages (1.1.0)
Requirement already satisfied: six in c:\users\bguru\anaconda3\lib\site-packages (fro
m chart_studio) (1.16.0)
Requirement already satisfied: requests in c:\users\bguru\anaconda3\lib\site-packages
(from chart_studio) (2.27.1)
Requirement already satisfied: plotly in c:\users\bguru\anaconda3\lib\site-packages
(from chart_studio) (5.6.0)
Requirement already satisfied: retrying>=1.3.3 in c:\users\bguru\anaconda3\lib\site-p
ackages (from chart_studio) (1.3.4)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\bguru\anaconda3\lib\site-p
ackages (from plotly->chart_studio) (8.0.1)
Requirement already satisfied: charset-normalizer~=2.0.0 in c:\users\bguru\anaconda3
\lib\site-packages (from requests->chart_studio) (2.0.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\bguru\anaconda3\lib\sit
e-packages (from requests->chart_studio) (2022.6.15)
Requirement already satisfied: idna<4,>=2.5 in c:\users\bguru\anaconda3\lib\site-pack
ages (from requests->chart_studio) (3.3)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\bguru\anaconda3\lib
\site-packages (from requests->chart_studio) (1.26.9)
Requirement already satisfied: cufflinks in c:\users\bguru\anaconda3\lib\site-package
s (0.17.3)
Requirement already satisfied: colorlover>=0.2.1 in c:\users\bguru\anaconda3\lib\site
-packages (from cufflinks) (0.3.0)
Requirement already satisfied: plotly>=4.1.1 in c:\users\bguru\anaconda3\lib\site-pac
kages (from cufflinks) (5.6.0)
Requirement already satisfied: numpy>=1.9.2 in c:\users\bguru\anaconda3\lib\site-pack
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Requirement already satisfied: ipywidgets>=7.0.0 in c:\users\bguru\anaconda3\lib\site
-packages (from cufflinks) (7.6.5)
Requirement already satisfied: setuptools>=34.4.1 in c:\users\bguru\anaconda3\lib\sit
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ckages (from cufflinks) (8.2.0)
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ges (from ipython>=5.3.0->cufflinks) (0.7.5)
Requirement already satisfied: decorator in c:\users\bguru\anaconda3\lib\site-package
s (from ipython>=5.3.0->cufflinks) (5.1.1)
Requirement already satisfied: stack-data in c:\users\bguru\anaconda3\lib\site-packag
es (from ipython>=5.3.0->cufflinks) (0.2.0)
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rs\bguru\anaconda3\lib\site-packages (from ipython>=5.3.0->cufflinks) (3.0.20)
Requirement already satisfied: traitlets>=5 in c:\users\bguru\anaconda3\lib\site-pack
ages (from ipython>=5.3.0->cufflinks) (5.1.1)
Requirement already satisfied: pygments>=2.4.0 in c:\users\bguru\anaconda3\lib\site-p
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Requirement already satisfied: ipython-genutils~=0.2.0 in c:\users\bguru\anaconda3\li
b\site-packages (from ipywidgets>=7.0.0->cufflinks) (0.2.0)
```

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Requirement already satisfied: ipykernel>=4.5.1 in c:\users\bguru\anaconda3\lib\site-
packages (from ipywidgets>=7.0.0->cufflinks) (6.9.1)
Requirement already satisfied: nbformat>=4.2.0 in c:\users\bguru\anaconda3\lib\site-p
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\lib\site-packages (from ipywidgets>=7.0.0->cufflinks) (3.5.2)
Requirement already satisfied: jupyter-client<8.0 in c:\users\bguru\anaconda3\lib\sit
e-packages (from ipykernel>=4.5.1->ipywidgets>=7.0.0->cufflinks) (6.1.12)
Requirement already satisfied: nest-asyncio in c:\users\bguru\anaconda3\lib\site-pack
ages (from ipykernel>=4.5.1->ipywidgets>=7.0.0->cufflinks) (1.5.5)
Requirement already satisfied: tornado<7.0,>=4.2 in c:\users\bguru\anaconda3\lib\site
-packages (from ipykernel>=4.5.1->ipywidgets>=7.0.0->cufflinks) (6.1)
Requirement already satisfied: debugpy<2.0,>=1.0.0 in c:\users\bguru\anaconda3\lib\si
te-packages (from ipykernel>=4.5.1->ipywidgets>=7.0.0->cufflinks) (1.5.1)
Requirement already satisfied: parso<0.9.0,>=0.8.0 in c:\users\bguru\anaconda3\lib\si
te-packages (from jedi>=0.16->ipython>=5.3.0->cufflinks) (0.8.3)
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ite-packages (from jupyter-client<8.0->ipykernel>=4.5.1->ipywidgets>=7.0.0->cufflink
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Requirement already satisfied: pywin32>=1.0 in c:\users\bguru\anaconda3\lib\site-pack
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0.0->cufflinks) (302)
Requirement already satisfied: jsonschema>=2.6 in c:\users\bguru\anaconda3\lib\site-p
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ckages (from nbformat>=4.2.0->ipywidgets>=7.0.0->cufflinks) (2.15.1)
Requirement already satisfied: pyrsistent!=0.17.0,!=0.17.1,!=0.17.2,>=0.14.0 in c:\us
ers\bguru\anaconda3\lib\site-packages (from jsonschema>=2.6->nbformat>=4.2.0->ipywidg
ets>=7.0.0->cufflinks) (0.18.0)
Requirement already satisfied: attrs>=17.4.0 in c:\users\bguru\anaconda3\lib\site-pac
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Requirement already satisfied: pytz>=2020.1 in c:\users\bguru\anaconda3\lib\site-pack
ages (from pandas>=0.19.2->cufflinks) (2021.3)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\bguru\anaconda3\lib\site-p
ackages (from plotly>=4.1.1->cufflinks) (8.0.1)
Requirement already satisfied: wcwidth in c:\users\bguru\anaconda3\lib\site-packages
(from prompt-toolkit!=3.0.0,!=3.0.1,<3.1.0,>=2.0.0->ipython>=5.3.0->cufflinks) (0.2.
5)
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ackages (from widgetsnbextension~=3.5.0->ipywidgets>=7.0.0->cufflinks) (6.4.8)
Requirement already satisfied: prometheus-client in c:\users\bguru\anaconda3\lib\site
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Requirement already satisfied: Send2Trash>=1.8.0 in c:\users\bguru\anaconda3\lib\site
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Requirement already satisfied: terminado>=0.8.3 in c:\users\bguru\anaconda3\lib\site-
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Requirement already satisfied: jinja2 in c:\users\bguru\anaconda3\lib\site-packages
(from notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.0.0->cufflinks) (2.1
1.3)
Requirement already satisfied: argon2-cffi in c:\users\bguru\anaconda3\lib\site-packa
```

```
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Requirement already satisfied: nbconvert in c:\users\bguru\anaconda3\lib\site-package
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4.4)
Requirement already satisfied: pywinpty>=1.1.0 in c:\users\bguru\anaconda3\lib\site-p
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Requirement already satisfied: argon2-cffi-bindings in c:\users\bguru\anaconda3\lib\s
ite-packages (from argon2-cffi->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidget
s>=7.0.0->cufflinks) (21.2.0)
Requirement already satisfied: cffi>=1.0.1 in c:\users\bguru\anaconda3\lib\site-packa
ges (from argon2-cffi-bindings->argon2-cffi->notebook>=4.4.1->widgetsnbextension~=3.
5.0->ipywidgets>=7.0.0->cufflinks) (1.15.0)
Requirement already satisfied: pycparser in c:\users\bguru\anaconda3\lib\site-package
s (from cffi>=1.0.1->argon2-cffi-bindings->argon2-cffi->notebook>=4.4.1->widgetsnbext
ension~=3.5.0->ipywidgets>=7.0.0->cufflinks) (2.21)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\bguru\anaconda3\lib\site-
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>cufflinks) (2.0.1)
Requirement already satisfied: pandocfilters>=1.4.1 in c:\users\bguru\anaconda3\lib\s
ite-packages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>
=7.0.0->cufflinks) (1.5.0)
Requirement already satisfied: testpath in c:\users\bguru\anaconda3\lib\site-packages
(from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.0.0->cuffl
inks) (0.5.0)
Requirement already satisfied: entrypoints>=0.2.2 in c:\users\bguru\anaconda3\lib\sit
e-packages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=
7.0.0->cufflinks) (0.4)
Requirement already satisfied: defusedxml in c:\users\bguru\anaconda3\lib\site-packag
es (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.0.0->cu
fflinks) (0.7.1)
Requirement already satisfied: mistune<2,>=0.8.1 in c:\users\bguru\anaconda3\lib\site
-packages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.
0.0->cufflinks) (0.8.4)
Requirement already satisfied: bleach in c:\users\bguru\anaconda3\lib\site-packages
(from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.0.0->cuffl
inks) (4.1.0)
Requirement already satisfied: nbclient<0.6.0,>=0.5.0 in c:\users\bguru\anaconda3\lib
\site-packages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidget
s>=7.0.0->cufflinks) (0.5.13)
Requirement already satisfied: beautifulsoup4 in c:\users\bguru\anaconda3\lib\site-pa
ckages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.0.0
->cufflinks) (4.11.1)
Requirement already satisfied: jupyterlab-pygments in c:\users\bguru\anaconda3\lib\si
te-packages (from nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=
7.0.0->cufflinks) (0.1.2)
Requirement already satisfied: soupsieve>1.2 in c:\users\bguru\anaconda3\lib\site-pac
kages (from beautifulsoup4->nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ip
ywidgets>=7.0.0->cufflinks) (2.3.1)
Requirement already satisfied: packaging in c:\users\bguru\anaconda3\lib\site-package
s (from bleach->nbconvert->notebook>=4.4.1->widgetsnbextension~=3.5.0->ipywidgets>=7.
0.0->cufflinks) (21.3)
Requirement already satisfied: webencodings in c:\users\bguru\anaconda3\lib\site-pack
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ion~=3.5.0->ipywidgets>=7.0.0->cufflinks) (3.0.4)
Requirement already satisfied: executing in c:\users\bguru\anaconda3\lib\site-package
```

```
s (from stack-data->ipython>=5.3.0->cufflinks) (0.8.3)
Requirement already satisfied: pure-eval in c:\users\bguru\anaconda3\lib\site-package
s (from stack-data->ipython>=5.3.0->cufflinks) (0.2.2)
Requirement already satisfied: asttokens in c:\users\bguru\anaconda3\lib\site-package
s (from stack-data->ipython>=5.3.0->cufflinks) (2.0.5)
Requirement already satisfied: plotly in c:\users\bguru\anaconda3\lib\site-packages
(5.6.0)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\bguru\anaconda3\lib\site-p
ackages (from plotly) (8.0.1)
Requirement already satisfied: six in c:\users\bguru\anaconda3\lib\site-packages (fro
m plotly) (1.16.0)
```

In [18]:
```
import numpy as np
import pandas as pd
import chart_studio.plotly as pl
#import plotly.plotly as pl
import plotly.offline as po
import cufflinks as cf
```

In [19]:
```
#setting offline mode
po.init_notebook_mode(connected=True)
cf.go_offline()
```

Creating the data

In [20]:
```
def createdata(data):
    #if user selects 1, I have to to genrate dataframe created randomly
    if(data==1):
        x= np.random.rand(100,5)
        df1=pd.DataFrame(x,columns=['A','B','C','D','E'])
    elif(data==2):
        # if user selects 2, I have to genrate dataframe which the user want

        # for columns
        x = [0,0,0,0,0]
        r1 = [0,0,0,0,0]
        r2= [0,0,0,0,0]
        r3= [0,0,0,0,0]
        r4= [0,0,0,0,0]
        print("Enter the values for columns")
        i=0
        for i in [0,1,2,3,4]:
            x[i]=input()
            i = i +1
        print("Enter the values for row 1")
        i=0
        for i in [0,1,2,3,4]:
            r1[i]=input()
            i = i +1
        print("Enter the values for row 2")
        i=0
        for i in [0,1,2,3,4]:
            r2[i]=input()
            i = i + 1
        print("Enter the values for row 3")
        i=0
        for i in [0,1,2,3,4]:
```

```
            r3[i]=input()
            i = i +1
        print("Enter the values for row 4")
        i=0
        for i in [0,1,2,3,4]:
            r4[i]=input()
            i = i +1

        df1= pd.DataFrame([r1,r2,r3,r4],columns=x)

    elif(data==3):
        file= input("Enter the file name: ")
        x = pd.read_csv(file)
        df1 = pd.DataFrame(x)

    else:
        print("DataFrame Creation failed please enter in between 1 to 3 and try again"
    return df1
```

In [ ]:

In [21]:
```
def plotter1(plot):
    if plot==1:
        fplot = df1.iplot(kind = 'scatter')

    elif plot==2:
        fplot = df1.iplot(kind = 'scatter',mode='markers',symbol='x',colorscale='paire
    elif plot==3:
        fplot = df1.iplot(kind="bar")
    elif plot==4:
        fplot = df1.iplot(kind="hist")
    elif plot==5:
        fplot = df1.iplot(kind="box")
    elif plot==6:
        fplot = df1.iplot(kind="surface")
    else:
        fplot =print("Select only between 1 to 6")
    return fplot
```

In [7]:
```
def plotter2(plot):
    col = input("Enter the number of columns you want to plot by selecting 1,2 or 3")
    col = int(col)
    if col==1:
        colm = input("Enter the column")
        if plot==1:
            fplot = df1[colm].iplot(kind = 'scatter')
        elif plot==2:
             fplot = df1[colm].iplot(kind = 'scatter',mode='markers',symbol='x',colors
        elif plot==3:
             fplot = df1[colm].iplot(kind="bar")
        elif plot==4:
             fplot = df1[colm].iplot(kind="hist")
        elif plot==5:
             fplot = df1[colm].iplot(kind="box")
        elif plot==6 or plot==7:
            print("For Bubble plot and Surface plot requires atleast 2 columns")
        else:
```

```
            fplot =print("Select only between 1 to 7")
        return fplot
    elif col==2:
        colm = input("Enter the column 1: ")
        colm1=input("Enter the column 2: ")
        if plot==1:
            fplot = df1[[colm,colm1]].iplot(kind = 'scatter')

        elif plot==2:
             fplot = df1[[colm,colm1]].iplot(kind = 'scatter',mode='markers',symbol='x
        elif plot==3:
             fplot = df1[[colm,colm1]].iplot(kind="bar")
        elif plot==4:
             fplot = df1[[colm,colm1]].iplot(kind="hist")
        elif plot==5:
             fplot = df1[[colm,colm1]].iplot(kind="box")
        elif plot==6:
            fplot = df1[[colm,colm1]].iplot(kind="surface")
        elif plot==7:
            s =input("Enter the size: ")
            fplot = df1.iplot(kind="bubble",x=colm,y=colm1,size =s)
        else:
            fplot =print("Select only between 1 to 7")
    elif col ==3:
        colm = input("Enter the column 1: ")
        colm1 = input("Enter the column 2: ")
        colm2 = input("Enter the column 3: ")
        if plot==1:
            fplot = df1[[colm,colm1,colm2]].iplot(kind = 'scatter')

        elif plot==2:
             fplot = df1[[colm,colm1,colm2]].iplot(kind = 'scatter',mode='markers',sym
        elif plot==3:
             fplot = df1[[colm,colm1,colm2]].iplot(kind="bar")
        elif plot==4:
             fplot = df1[[colm,colm1,colm2]].iplot(kind="hist")
        elif plot==5:
             fplot = df1[[colm,colm1,colm2]].iplot(kind="box")
        elif plot==6:
            fplot = df1[[colm,colm1,colm2]].iplot(kind="surface")
        elif plot==7:
            #ple
            s = input("Enter the size: ")
            fplot = df1.iplot(kind="bubble",x=colm,y=colm1,z=colm2,size =s)
        else:
            fplot =print("Select only between 1 to 7")
    else:
        fplot = print("Select only between 1 to 3")
```

In [22]:

```
def main(cate):
    if cate ==1:
        print("select the type of plot u need to plot by writing 1 to 6")
        print("1.Line Plot")
        print("2.Scatter Plot")
        print("3.Bar Plot")
        print("4.Histogram")
        print("5.Box Plot")
        print("6.Surface Plot")
```

```
        plot = int(input())
        out = plotter1(plot)
    elif cate ==2:
        print("select the type of plot u need to plot by writing 1 to 6")
        print("1.Line Plot")
        print("2.Scatter Plot")
        print("3.Bar Plot")
        print("4.Histogram")
        print("5.Box Plot")
        print("6.Surface Plot")
        print("7.Bubble Sort")
        plot = int(input())
        out = plotter2(plot)
    else:
        print("Please enter 1 or 2, Try Again")
```

In [ ]:

In [24]:
```
#starting
print("select the type of data you need to plot(By writing 1,2 or 3)")
#if I select 3 it will goes to the createdata class
print("1.Random dat with 100 rows and 5 columns")
print("2.customise data farme with 4 rows and 5 columns ")
print("3.upload csv/json/txt file:")
data = int(input())
df1 =createdata(data)
```

```
select the type of data you need to plot(By writing 1,2 or 3)
1.Random dat with 100 rows and 5 columns
2.customise data farme with 4 rows and 5 columns
3.upload csv/json/txt file:
3
Enter the file name: monthly_temperature.csv
```

In [32]:
```
df1.describe()
```

Out[32]:

	Year	Month	Temperature
count	1716.000000	1716.000000	1716.000000
mean	1951.000000	6.500000	0.086603
std	41.291568	3.453059	0.475834
min	1880.000000	1.000000	-1.510000
25%	1915.000000	3.750000	-0.240000
50%	1951.000000	6.500000	0.000000
75%	1987.000000	9.250000	0.320000
max	2022.000000	12.000000	1.940000

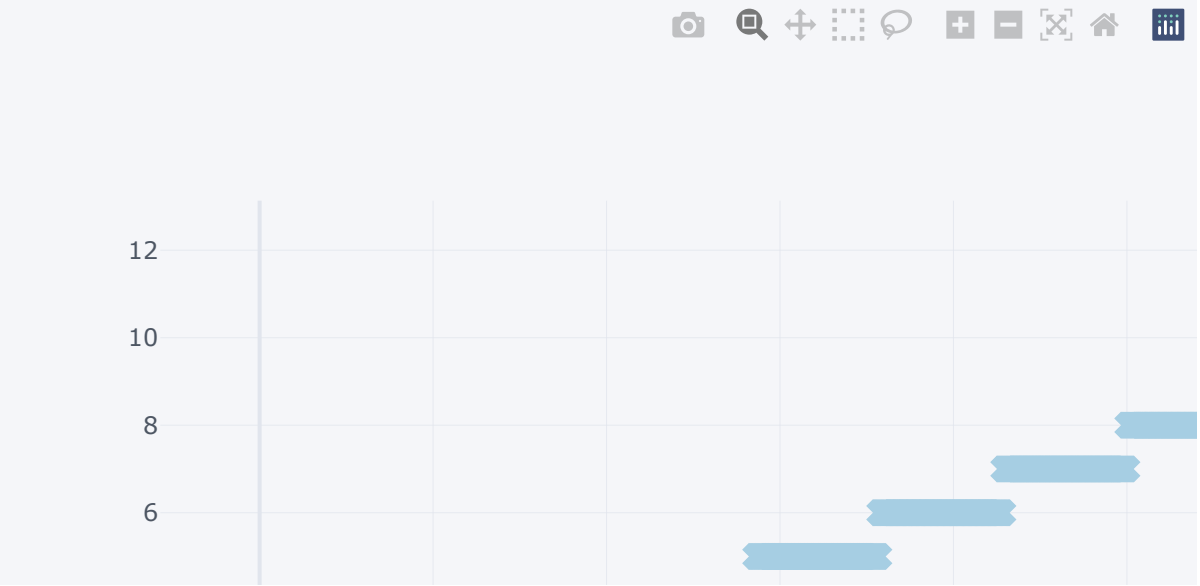
In [30]:
```
print("what kind of plot u need, the  complete data plot or column plot")

cate= input("Enter 1 for  plotting all columns or Enter 2 for specifying columns to pl
cate = int(cate)
```

```
what kind of plot u need, the  complete data plot or column plot
Enter 1 for  plotting all columns or Enter 2 for specifying columns to plot2
```

In [31]:
```
main(cate)
```

```
select the type of plot u need to plot by writing 1 to 6
1.Line Plot
2.Scatter Plot
3.Bar Plot
4.Histogram
5.Box Plot
6.Surface Plot
7.Bubble Sort
2
Enter the number of columns you want to plot by selecting 1,2 or 32
Enter the column 1: Month
Enter the column 2: Temperature
```



In [ ]: