```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import pprint
import datetime
import plotly.express as px

a = np.random.randint(0,100,150)
b = np.random.randint(0,100,150)

print(a)
print(b)

px.scatter(x=a,y=b)

px.scatter(x=a,y=b,labels={"x":"X-AXIS","y":"Y-AXIS"},title="Plot Graph")

px.line(x=a,y=b,labels={"x":"X-AXIS","y":"Y-AXIS"},title="Plot Graph")

c = np.arange(1,151)
px.line(x=c,y=b,labels={"x":"X-AXIS","y":"Y-AXIS"},title="Plot Graph")

px.bar(x=c,y=b,labels={"x":"X-AXIS","y":"Y-AXIS"},title="Bar Graph")

px.bar(x=a,y=b,labels={"x":"X-AXIS","y":"Y-AXIS"},title="Stacked Bar Graph")

df = px.data.gapminder()
df

df1 = px.data.gapminder().query("country == 'Afghanistan'")
df1

px.bar(df1,x="year",y="lifeExp",hover_name="gdpPercap",color="pop") # Always keep X on Time based or category based and Y-axis on Continous based. Hover_name s

df

px.bar(df,x="continent",y="pop",hover_name="country",color="lifeExp",animation_frame="year",range_y=[0,4000000000])

px.bar(df,x="pop",y="continent",hover_name="country",color="lifeExp",animation_frame="year",range_x=[0,4000000000])

df

px.bar(df,x="continent",y="pop",hover_name="country",color="lifeExp",animation_frame="year",range_y=[0,4000000000])

df2 = px.data.tips()
df2

px.histogram(df2,x="tip",color="sex")

#for histogram
# X should be a continous value
# color should be category value
px.histogram(df2,x="total_bill",color="sex")

#for pie
# values should be a continous value
# names should be category value
px.pie(df2,names="day",values="total_bill")

px.pie(df2,names="day",values="total_bill",hole=0.3)

df3 = px.data.gapminder().query("year==1952")
df3

fig = px.pie(df3,names="country",values="pop")
fig.update_traces(textposition="inside",textinfo="label+text+value+percent")
fig.show()

# Use multiple category columns in path, single continous column in values
px.sunburst(df2,path=["day","time","sex","smoker","size"],values="total_bill")

px.sunburst(df2,path=["size","sex","smoker","day","time"],values="total_bill")

px.sunburst(df2,path=["size","sex","smoker","day","time"],values="total_bill")

df

px.sunburst(df,path=["year","continent","country"],values="pop")
```