"City" :
["Delhi","Mumbai","Kolkāta","Bangalore","Chennai","Hyderābād","Pune","Ahmedabad","Sūrat","Prayagraj","Lucknow","Jaipur","Cawnpore","Mirzāpur","Nāgpur","Ghāziābād","Vadodara","Vishākhapatnam","Indore","Thāne","Bhopāl","Chinchvad","Patna","Bilāspur","Ludhiāna","Agwār","Āgra","Madurai","Jamshedpur","Nāsik","Farīdābād","Aurangābād"],

```
import pandas as pd

```

```
a = {
  "Name" :["32226000","24973000","18502000","15386000","12395000","10494000","8231000","8009000
  "Population" :["32226000","24973000","18502000","15386000","12395000","10494000","8231000","8
  "cladss" :["32226000","24973000","18502000","15386000","12395000","10494000","8231000","80090
}

C_P = pd.DataFrame(a)
```

```
C_P.to_csv("Population.csv")
data = pd.read_csv("Population.csv")
data

data1 = data.T
```

```
import sklearn
```

```
from sklearn.decomposition import PCA
```

```
pca = PCA(n_components =  2)
```

```
pca
```

```
PCA
PCA(n_components=3)
```

```
pca.fit(data)
```

```
PCA
PCA(n_components=3)
```

```
x=pca.transform(data)
```

```
data.shape
```

```
(32, 4)
```

```
x.shape
```

```
(32, 2)
```

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```
pca = PCA(n_components = 3)
```

```
pca.fit(data1)
```

```
PCA(n_components=3)
```

```
y = pca.transform(data1)
```

```
data1.shape
```

```
(4, 32)
```

```
y.shape
```

```
(4, 2)
```