EXPERIMENT 10

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A PYTHON PROGRAM TO DIMENTION REDUCTION USING PCA

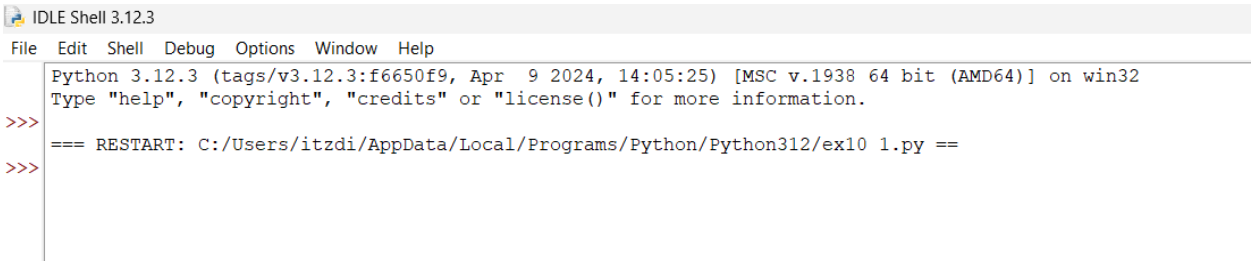
AIM:

TO IMPLEMENT A PYTHON PROGRAM TO IMPLEMENT DIMENTION REDUCTION USING PCA

CODE:FOLLOWED BY 9B

```
from sklearn import datasets
import pandas as pd
from sklearn.preprocessing import StandardScaler
from sklearn.decomposition import PCA
import seaborn as sns
iris = datasets.load_iris()
df = pd.DataFrame(iris['data'], columns = iris['feature_names'])
df.head()


scalar = StandardScaler()
scaled_data = pd.DataFrame(scalar.fit_transform(df)) #scaling the data
scaled_data

sns.heatmap(scaled_data.corr())

pca = PCA(n_components = 3)
pca.fit(scaled_data)
data_pca = pca.transform(scaled_data)
data_pca = pd.DataFrame(data_pca,columns=['PC1','PC2','PC3'])
data_pca.head()

sns.heatmap(data_pca.co)
```

OUTPUT:



RESULT:

TO IMPLEMENT A PYTHON PROGRAM TO IMPLEMENT DIMENTION REDUCTION USING AS BEEN ANALYSED AND VERIFIED