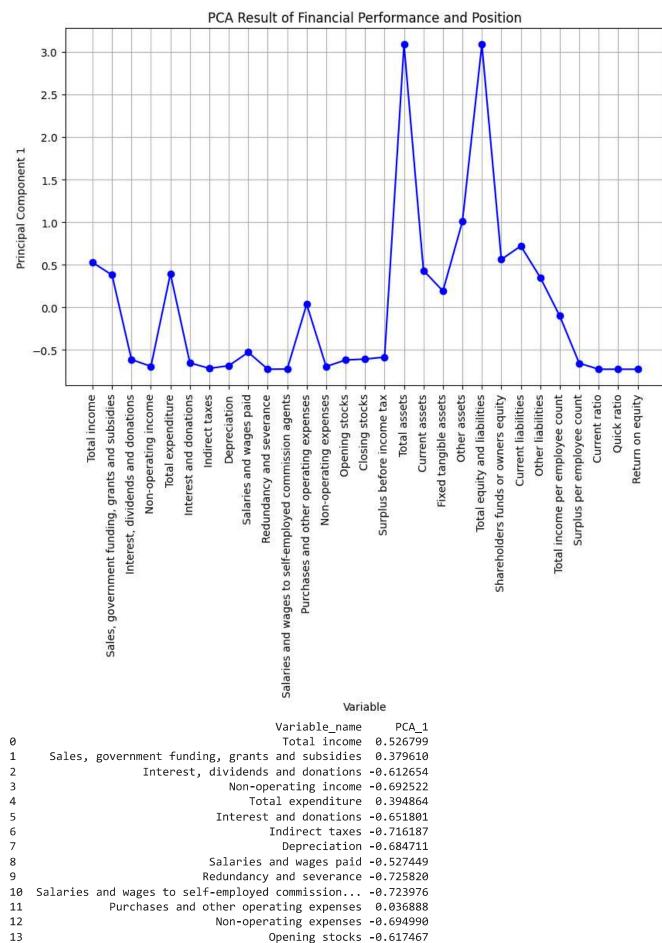
```
import pandas as pd
from sklearn.decomposition import PCA
from sklearn.preprocessing import StandardScaler
import matplotlib.pyplot as plt
# Load the dataset
data = pd.DataFrame({
    'Variable name': ["Total income", "Sales, government funding, grants and subsidies", "Interest, dividend:
                      "Non-operating income", "Total expenditure", "Interest and donations", "Indirect taxes
                      "Depreciation", "Salaries and wages paid", "Redundancy and severance",
                      "Salaries and wages to self-employed commission agents", "Purchases and other operatin
                      "Non-operating expenses", "Opening stocks", "Closing stocks", "Surplus before income to
                      "Total assets", "Current assets", "Fixed tangible assets", "Other assets",
                      "Total equity and liabilities", "Shareholders funds or owners equity", "Current liabil:
                      "Other liabilities", "Total income per employee count", "Surplus per employee count",
                      "Current ratio", "Quick ratio", "Return on equity"],
    'Value': [930995, 821630, 84354, 25010, 832964, 55267, 7426, 30814, 147663, 269, 1639, 566979,
              23176, 80778, 88197, 105450, 2831894, 861255, 681890, 1288749, 2831893, 957410,
              1074693, 799791, 464600, 52600, 80, 72, 11]
})
# Extracting values for PCA
X = data[['Value']]
# Standardizing the data
scaler = StandardScaler()
X scaled = scaler.fit transform(X)
# Apply PCA to reduce dimensionality
pca = PCA(n components=1)
X pca = pca.fit transform(X scaled)
# Displaying PCA result
data['PCA 1'] = X pca
# Plotting the PCA result
plt.figure(figsize=(10, 6))
plt.plot(data['Variable name'], data['PCA 1'], marker='o', linestyle='-', color='b')
plt.xlabel('Variable')
plt.ylabel('Principal Component 1')
plt.title('PCA Result of Financial Performance and Position')
plt.xticks(rotation=90)
plt.grid(True)
plt.show()
print(data[['Variable name', 'PCA 1']])
```

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15

 $\overline{\mathbf{x}}$



Closing stocks -0.607482

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Surplus before income tax -0.584262

11/13/24, 11:05 PM	Exp8_A l ML_Lab.ipynb - Colab
16	lotal assets 3.085176
17	Current assets 0.432939
18	Fixed tangible assets 0.191541
19	Other assets 1.008283
20	Total equity and liabilities 3.085125
21	Shareholders funds or owners equity 0.562350
22	Current liabilities 0.720195
23	Other liabilities 0.350218
24	Total income per employee count -0.100899
25	Surplus per employee count -0.655390
26	Current ratio -0.726074
27	Quick ratio -0.726085
28	Return on equity -0.726167

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