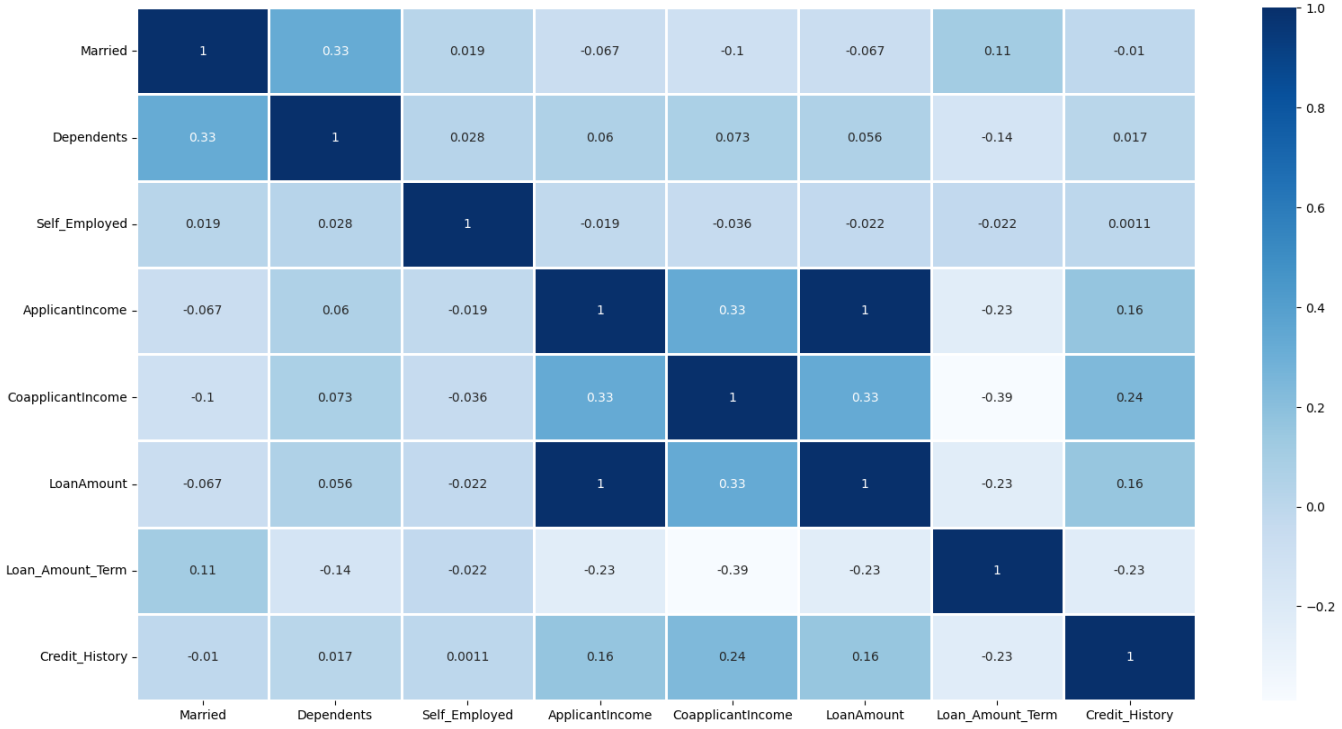
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt


df=pd.read_excel('/content/python_dashboard.xlsx')
df = df.iloc[:, :-2]


df
```

| | Loan_ID | Gender | Married | Dependents | Education | Self_Employed | Appli |
|---|---|---|---|---|---|---|---|
| **0** | LP001015 | Male | True | 0.0 | Graduate | 0.0 | |
| **1** | LP001022 | Male | True | 1.0 | Graduate | 0.0 | |
| **2** | LP001031 | Male | True | 2.0 | Graduate | 0.0 | |
| **3** | LP001035 | Male | True | 2.0 | Graduate | 0.0 | |
| **4** | LP001051 | Male | False | 0.0 | FALSEt Graduate | 0.0 | |
| **...** | ... | ... | ... | ... | ... | ... | |
| **367** | LP34545 | Male | False | 4.0 | Graduate | 0.0 | |
| **368** | LP456889 | Male | False | 2.0 | Graduate | 0.0 | |
| **369** | LP45667898 | Male | False | 1.0 | NaN | 0.0 | |
| **370** | dh9099 | Female | False | 2.0 | Graguate | 0.0 | |
| **371** | LP2099745 | Female | False | 3.0 | Graduate | 1.0 | |

372 rows × 12 columns

```
import seaborn as sb
plt.figure(figsize=(19,10))
sb.heatmap(df.corr(),annot=True,linewidth=1,cmap='Blues')
```

```
<ipython-input-4-536d1fcf2680>:3: FutureWarning: The default value of numer
  sb.heatmap(df.corr(),annot=True,linewidth=1,cmap='Blues')
<Axes: >
```



```
import numpy as np
import pandas as pd

df = df.dropna(subset=['ApplicantIncome', 'LoanAmount'])
df = df[(df['ApplicantIncome'].apply(lambda x: isinstance(x, (int, float)))) & (

input = df['ApplicantIncome']
output = df['LoanAmount']

def weights(input,output):
    mean_x=np.mean(input)
    mean_y=np.mean(output)
    #compute theta_1
    theta_1= (np.sum((input-mean_x)*(output-mean_y)))/(np.sum((input-mean_x)**2)

    #compute theta_0
    theta_0=mean_y-theta_1*mean_x
    print("Theta_0 and Theta_1 are {} and {} respectively".format(theta_0,theta_
    return [theta_0, theta_1]

coeff = weights(np.array(input),np.array(output))
```

```
Theta_0 and Theta_1 are -132904.0796551439 and 120.5684588974 respectively
```

Colab paid products - Cancel contracts here