

```
In [17]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [46]: df=pd.read_csv("/Users/bob/Downloads/13_placement.csv")
df.fillna(0,inplace=True)
df
```

Out[46]:

	cgpa	placement_exam_marks	placed
0	7.19	26.0	1
1	7.46	38.0	1
2	7.54	40.0	1
3	6.42	8.0	1
4	7.23	17.0	0
...
995	8.87	44.0	1
996	9.12	65.0	1
997	4.89	34.0	0
998	8.62	46.0	1
999	4.90	10.0	1

1000 rows × 3 columns

```
In [47]: df.head()
```

Out[47]:

	cgpa	placement_exam_marks	placed
0	7.19	26.0	1
1	7.46	38.0	1
2	7.54	40.0	1
3	6.42	8.0	1
4	7.23	17.0	0

In [48]: `df.info()`

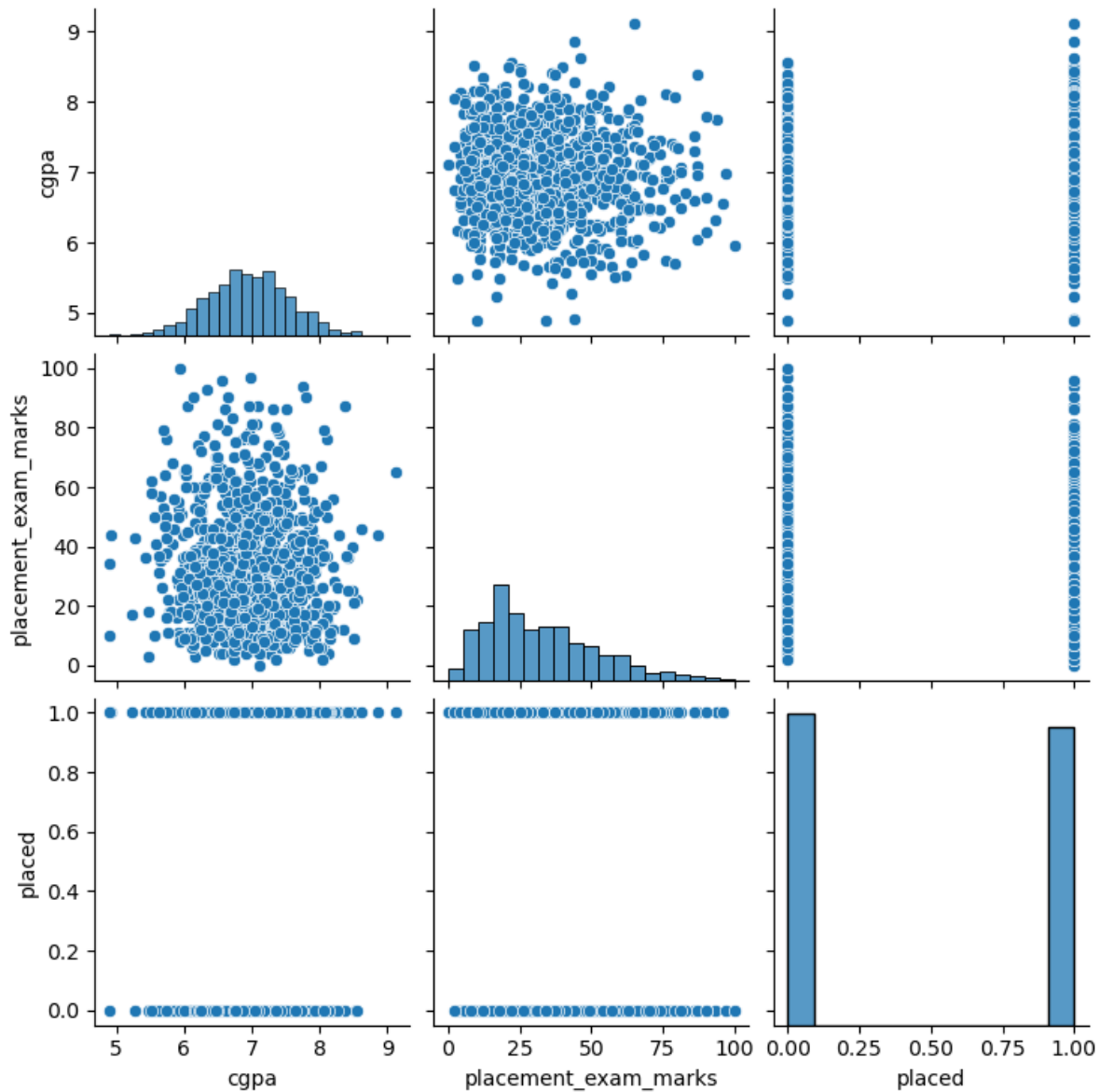
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1000 entries, 0 to 999
Data columns (total 3 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   cgpa                  1000 non-null   float64
1   placement_exam_marks 1000 non-null   float64
2   placed                1000 non-null   int64
dtypes: float64(2), int64(1)
memory usage: 23.6 KB
```

In [49]: `df.columns`

Out [49]: `Index(['cgpa', 'placement_exam_marks', 'placed'], dtype='object')`

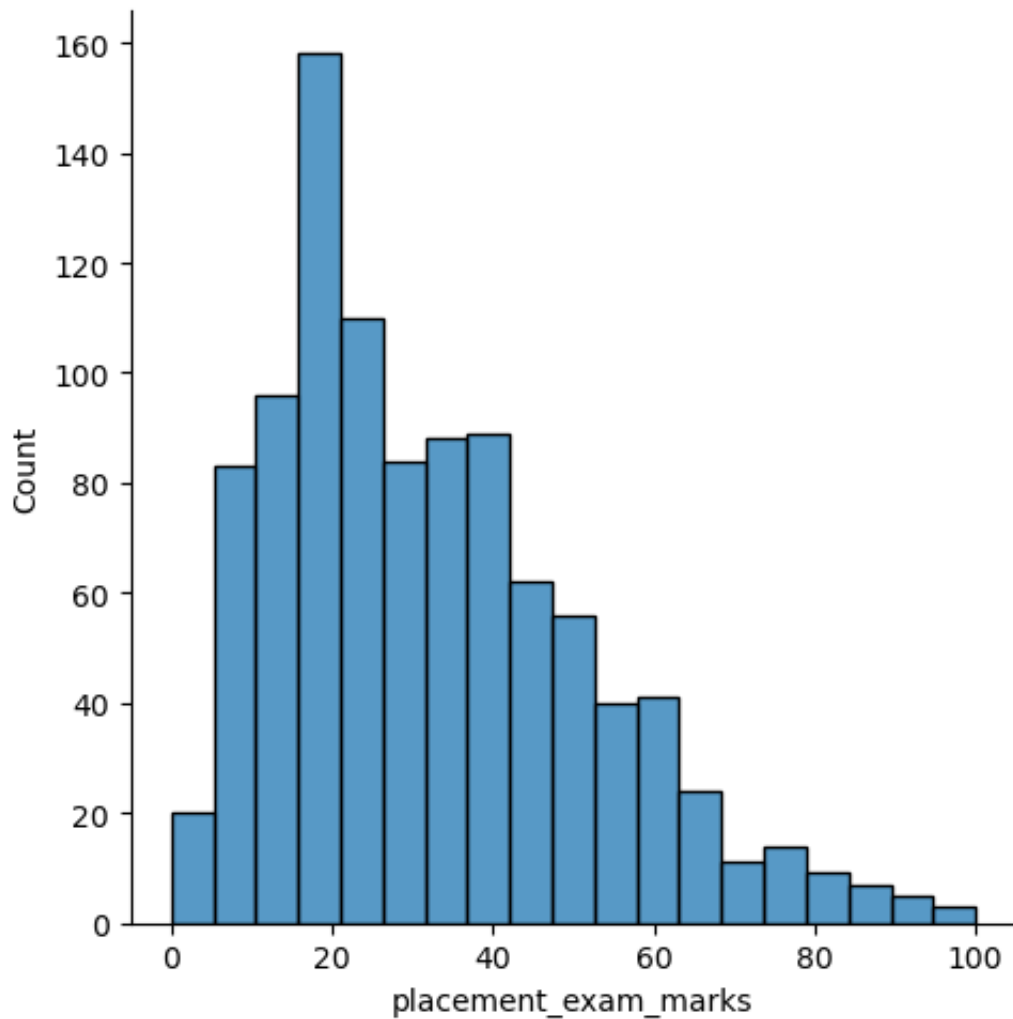
```
In [50]: sns.pairplot(df)
```

```
Out[50]: <seaborn.axisgrid.PairGrid at 0x7f8ef4ba2b00>
```



```
In [51]: sns.displot(df['placement_exam_marks'])
```

```
Out[51]: <seaborn.axisgrid.FacetGrid at 0x7f8ecfee3370>
```

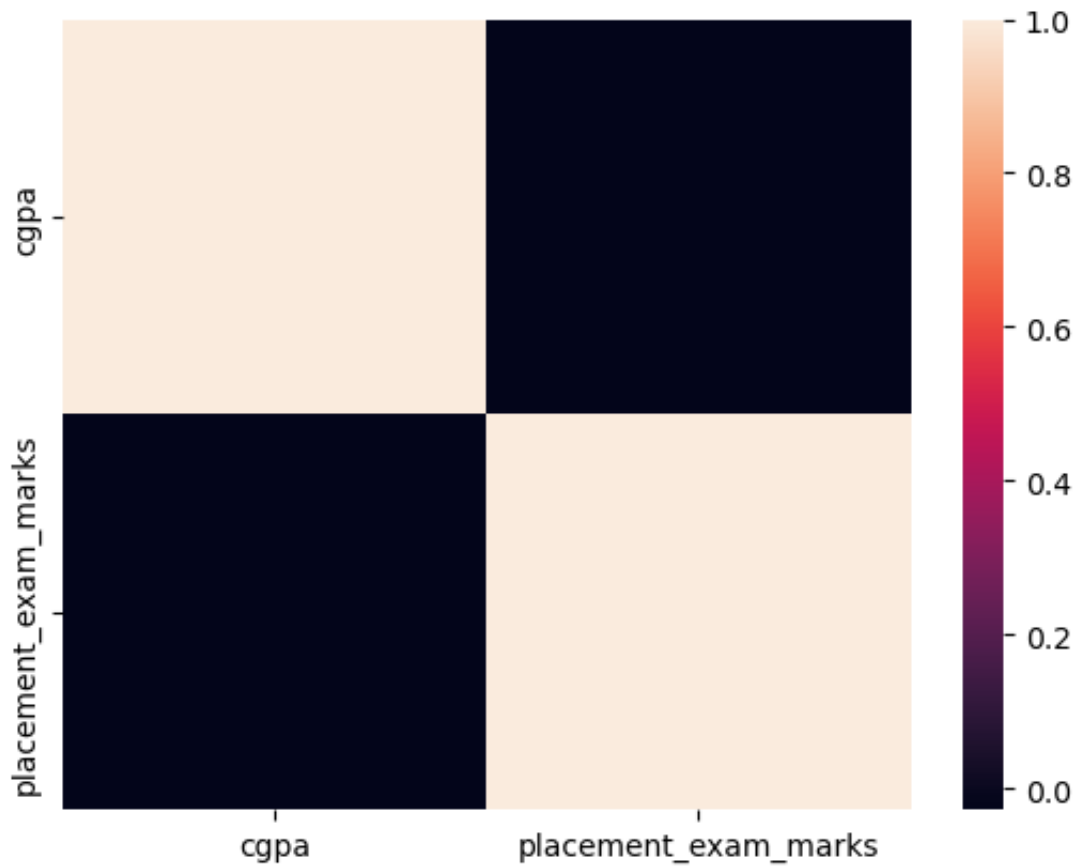


```
In [52]: df1=df.drop(['placed'],axis=1)
df1
df1=df1.drop(df1.index[1537:])
df1.isna().sum()
```

```
Out[52]: cgpa                0
placement_exam_marks      0
dtype: int64
```

```
In [53]: sns.heatmap(df1.corr())
```

```
Out[53]: <Axes: >
```



```
In [54]: from sklearn.model_selection import train_test_split  
from sklearn.linear_model import LinearRegression
```

```
In [55]: df1.isna().sum()
```

```
Out[55]: cgpa          0  
placement_exam_marks  0  
dtype: int64
```

```
In [56]: y=df1['placement_exam_marks']  
x=df1.drop(['placement_exam_marks'],axis=1)  
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.3)  
print(x_train)
```

```
      cgpa  
206  7.50  
191  6.63  
702  6.24  
467  6.65  
507  6.77  
..  
277  6.45  
710  7.56  
587  7.58  
441  7.80  
74   6.16
```

```
[700 rows x 1 columns]
```

```
In [57]: model=LinearRegression()  
model.fit(x_train,y_train)  
model.intercept_
```

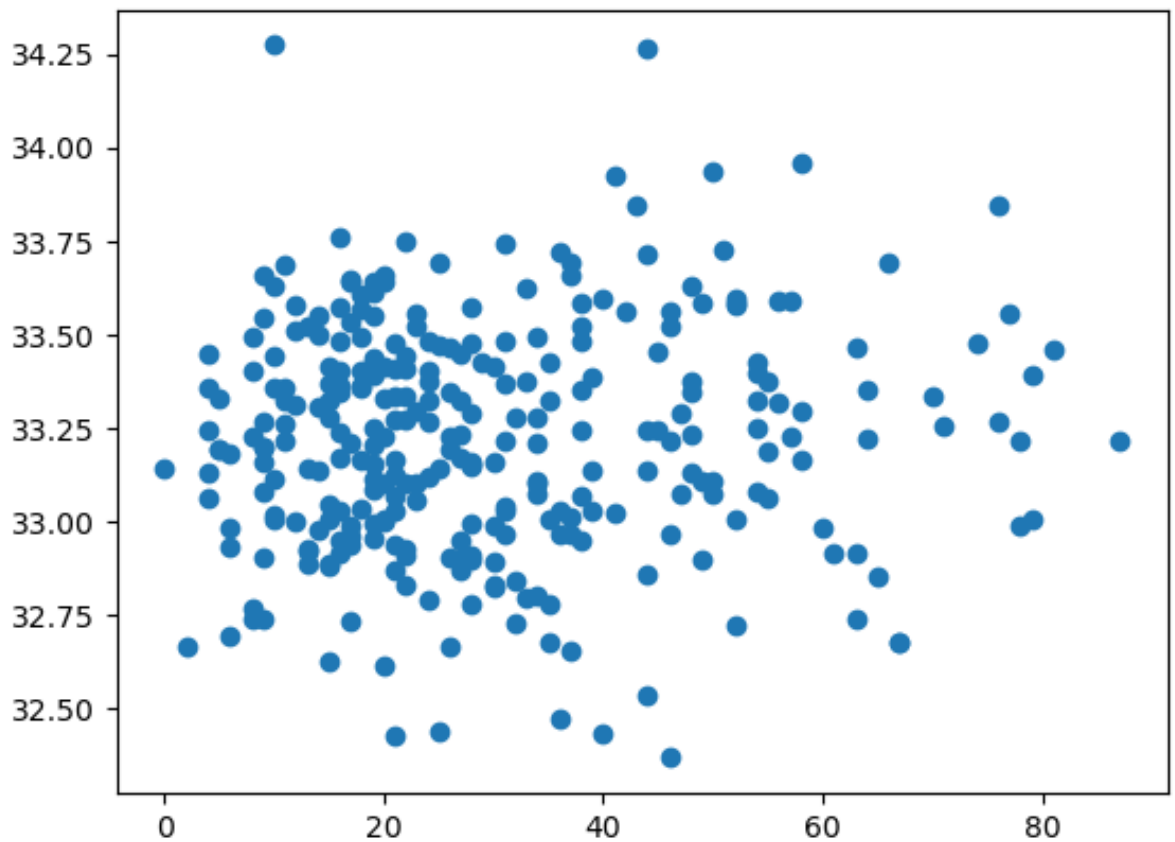
```
Out[57]: 36.78350248626957
```

```
In [58]: model.coef_
```

```
Out[58]: array([-0.5123083])
```

```
In [59]: prediction=model.predict(x_test)  
plt.scatter(y_test,prediction)
```

Out [59]: <matplotlib.collections.PathCollection at 0x7f8ef4ba2fb0>



```
In [60]: model.score(x_test,y_test)
```

Out [60]: -0.031875624215878195

```
In [ ]:
```