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

```
df = pd.read_csv('/content/AI I Autumn 23-24 (1).csv')
```

```
df
```

	#	Faculty Name	Department Name	Program Group Name	Course Name	Branch Name	Class Name	Result Published?	Enrolment Number	Scholar Number	Roll Number	
0	1	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10006	230132	23BTA3ARI10006	
1	2	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10026	230052	23BTA3ARI10026	
2	3	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10024	230471	23BTA3ARI10024	
3	4	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10014	230273	23BTA3ARI10014	V
4	5	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10023	230177	23BTA3ARI10023	
5	6	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10038	231945	23BTA3ARI10038	
6	7	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10015	231689	23BTA3ARI10015	
7	8	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10012	230954	23BTA3ARI10012	
8	9	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI11031	230952	23BTA3ARI11031	F
9	10	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10017	231059	23BTA3ARI10017	
10	11	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10010	230249	23BTA3ARI10010	
11	12	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10007	230265	23BTA3ARI10007	A
12	13	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10025	230336	23BTA3ARI10025	
13	14	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10039	230027	23BTA3ARI10039	
14	15	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10022	230486	23BTA3ARI10022	
15	16	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10001	231921	23BTA3ARI10001	
16	17	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence	Yes	23BTA3ARI10028	230769	23BTA3ARI10028	

		Computing	COMPUTING		(Honors)		I Semester					
17	18	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10003	232588	23BTA3ARI10003	
18	19	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10018	230264	23BTA3ARI10018	
19	20	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10009	230930	23BTA3ARI10009	
20	21	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	22BTA3ARI10007	220788	22BTA3ARI10007	
21	22	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	22BTA3ARI10019	220327	22BTA3ARI10019	
22	23	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10030	231673	23BTA3ARI10030	L
23	24	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10008	230254	23BTA3ARI10008	
24	25	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	22BTA3ARI10017	220946	22BTA3ARI10017	S
25	26	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10011	230134	23BTA3ARI10011	
26	27	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10035	231529	23BTA3ARI10035	
27	28	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI11016	230133	23BTA3ARI11016	K
28	29	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI11027	230969	23BTA3ARI11027	
29	30	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10034	230737	23BTA3ARI10034	T
30	31	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10019	231556	23BTA3ARI10019	
31	32	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10036	231624	23BTA3ARI10036	
32	33	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10033	231672	23BTA3ARI10033	
33	34	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	22BTA3ARI10014	222052	22BTA3ARI10014	
		Faculty of	SCHOOL OF		Bachelor of		B.Tech -					

34	35	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	Artificial Intelligence I Semester	Yes	23BTA3ARI10013	231195	23BTA3ARI10013
35	36	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10004	230615	23BTA3ARI10004

```
df.head(1)
```

	#	Faculty Name	Department Name	Program Group Name	Course Name	Branch Name	Class Name	Result Published?	Enrolment Number	Scholar Number	Roll Number	Studen Nam
0	1	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10006	230132	23BTA3ARI10006	ANSH GUPT

```
df.tail()
```

	#	Faculty Name	Department Name	Program Group Name	Course Name	Branch Name	Class Name	Result Published?	Enrolment Number	Scholar Number	Roll Number	S
31	32	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10036	231624	23BTA3ARI10036	T SHA
32	33	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10033	231672	23BTA3ARI10033	SRIC NA
33	34	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	22BTA3ARI10014	222052	22BTA3ARI10014	
34	35	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10013	231195	23BTA3ARI10013	K
35	36	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10004	230615	23BTA3ARI10004	

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 36 entries, 0 to 35
Data columns (total 18 columns):
 #   Column              Non-Null Count  Dtype
---  ------              --------------  -----
 0   #                   36 non-null     int64
 1   Faculty Name        36 non-null     object
 2   Department Name     36 non-null     object
 3   Program Group Name  36 non-null     object
 4   Course Name         36 non-null     object
 5   Branch Name         36 non-null     object
 6   Class Name          36 non-null     object
 7   Result Published?   36 non-null     object
 8   Enrolment Number    36 non-null     object
 9   Scholar Number      36 non-null     int64
 10  Roll Number         36 non-null     object
 11  Student Name        36 non-null     object
 12  Gender              36 non-null     object
 13  Category            36 non-null     object
 14  Student Status      36 non-null     object
 15  Result              36 non-null     object
 16  SGPA                36 non-null     float64
 17  CGPA                36 non-null     float64
dtypes: float64(2), int64(2), object(14)
memory usage: 5.2+ KB
```

```
df.shape
```

```
(36, 18)
```

```
df.describe()
```

	#	Scholar Number	SGPA	CGPA
count	36.000000	36.000000	36.000000	36.000000
mean	18.500000	229770.638889	7.778889	7.778889
std	10.535654	3208.811655	0.813155	0.813155
min	1.000000	220327.000000	6.420000	6.420000
25%	9.750000	230166.250000	7.200000	7.200000
50%	18.500000	230550.500000	7.690000	7.690000
75%	27.250000	231278.500000	8.312500	8.312500
max	36.000000	232588.000000	9.330000	9.330000

Start coding or generate with AI.

```
df.describe(include="object")
```

	Faculty Name	Department Name	Program Group Name	Course Name	Branch Name	Class Name	Result Published?	Enrolment Number	Roll Number	Student Name	Gend
count	36	36	36	36	36	36	36	36	36	36	
unique	1	1	1	1	1	1	1	36	36	36	
top	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10006	23BTA3ARI10006	ANSHI GUPTA	Ma
freq	36	36	36	36	36	36	36	1	1	1	

```
df.isnull().sum()
```

```
#                    0
Faculty Name         0
Department Name      0
Program Group Name   0
Course Name          0
Branch Name          0
Class Name           0
Result Published?    0
Enrolment Number     0
Scholar Number       0
Roll Number          0
Student Name         0
Gender               0
Category             0
Student Status       0
Result               0
SGPA                 0
CGPA                 0
dtype: int64
```

```
df.dropna(inplace=True)
```

```
df.isnull().sum()
```

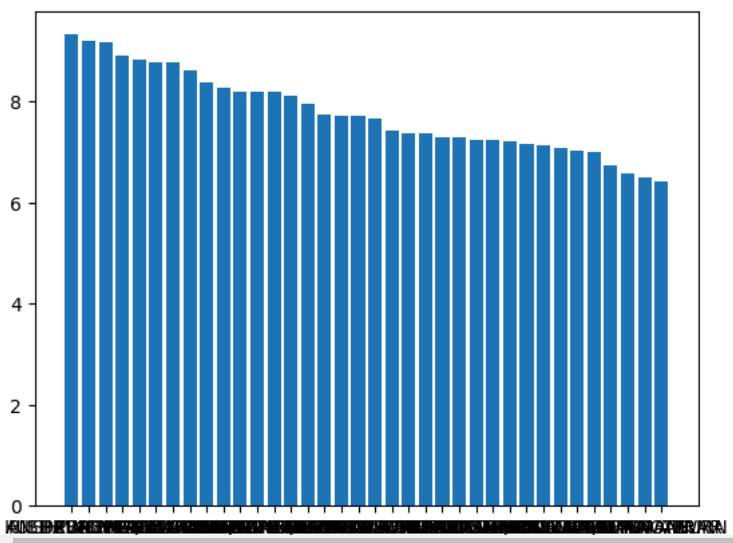
```
#                    0
Faculty Name         0
Department Name      0
Program Group Name   0
Course Name          0
Branch Name          0
Class Name           0
Result Published?    0
Enrolment Number     0
Scholar Number       0
Roll Number          0
Student Name         0
Gender               0
Category             0
Student Status       0
```

```
Result               0
SGPA                 0
CGPA                 0
dtype: int64
```

```
df.iloc[0:3]
```

	#	Faculty Name	Department Name	Program Group Name	Course Name	Branch Name	Class Name	Result Published?	Enrolment Number	Scholar Number	Roll Number	Stude Na
0	1	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10006	230132	23BTA3ARI10006	ANS GUP
1	2	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10026	230052	23BTA3ARI10026	RISHAE HUNI
2	3	Faculty of Advance Computing	SCHOOL OF ADVANCE COMPUTING	UG	Bachelor of Technology - CSE (Honors)	ARTIFICIAL INTELLIGENCE	B.Tech - Artificial Intelligence I Semester	Yes	23BTA3ARI10024	230471	23BTA3ARI10024	PRIN PAT

```
plt.bar(df['Student Name'],df['CGPA'])
plt.show()
```




```
df.columns
```

```
Index(['#', 'Faculty Name', 'Department Name', 'Program Group Name',
       'Course Name', 'Branch Name', 'Class Name', 'Result Published?',
       'Enrolment Number', 'Scholar Number', 'Roll Number', 'Student Name',
       'Gender', 'Category', 'Student Status', 'Result', 'SGPA', 'CGPA'],
      dtype='object')
```

Double-click (or enter) to edit

```
# performing EDA
# to more information about dataset
```

```
# 1.) Univariate Analysis
```

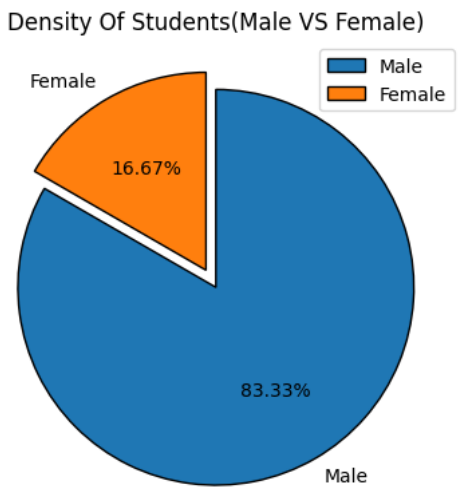
```
df['Gender'].replace({'Female':0,'Male':1},inplace =True)
```

```
# Here i replace Male = 1 and Female = 0
```

```
df['Gender'].value_counts()
```

```
Gender
1    30
0     6
Name: count, dtype: int64
```

```
plt.pie(df['Gender'].value_counts(),startangle=90,counterclock=False,wedgeprops={"edgecolor":"black"},autopct="%0.2f%%",radius=1,explode=[0,
plt.legend(loc="upper right")
plt.title("Density Of Students(Male VS Female)")
plt.show()
```

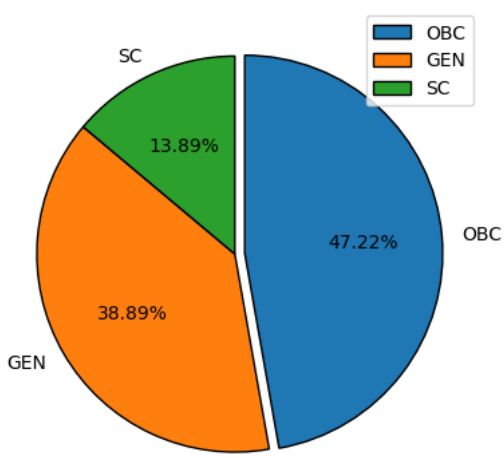



```
# we got to know that percentage of male is greater than the percentage of Female
```

```
df['Category'].value_counts()
```

```
Category
OBC    17
GEN    14
SC      5
Name: count, dtype: int64
```

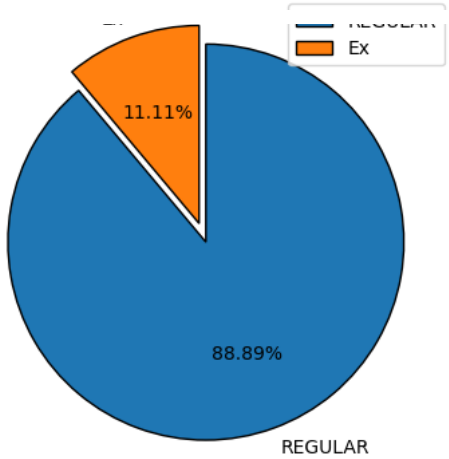
```
plt.pie(df['Category'].value_counts(),startangle=90,counterclock=False,wedgeprops={"edgecolor":"black"},autopct="%0.2f%%",labels=("OBC","GEI
plt.legend(loc="upper right")
plt.show()
```




```
# As we can see in the graph that Category "OBC" is more as compare to others
```

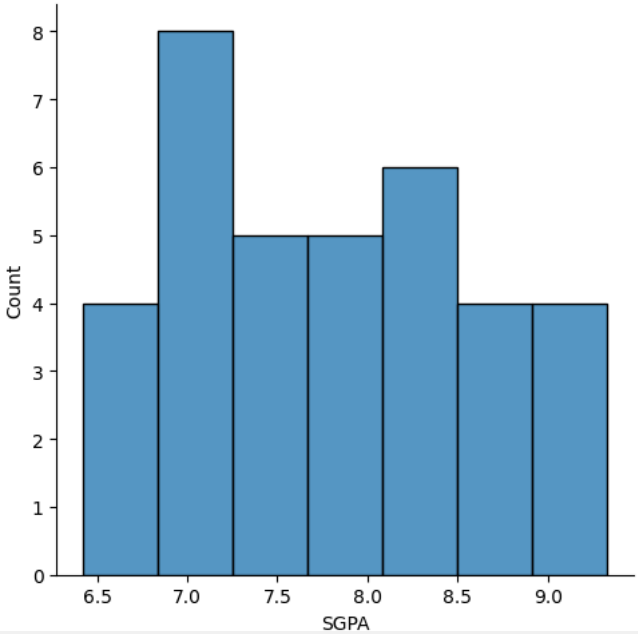
```
plt.pie(df['Student Status'].value_counts(),startangle=90,counterclock=False,autopct="%0.2f%%",wedgeprops={"edgecolor":"black"},labels=("REG
plt.legend(loc="upper right")
```

```
plt.show()
```




```
sns.displot(df['SGPA'])
```

```
<seaborn.axisgrid.FacetGrid at 0x7ae1d89856f0>
```




```
# we got to know that most of student got 7.0 SGPA
```

```
sns.displot(df['CGPA'])
```