# Assignment 5

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**Dataset :** Mumbai  university  result

**Code:**

```python
import pandas as pd
import matplotlib.pyplot as plt
df=pd.read_csv("/content/sample_data/ass4_dataset.csv")
df1 = df.groupby('year_of_admission').max()
plt.plot(df1.index, df1['sgpi'], marker='o')
# Customize the chart
plt.title("year of admission vs sgpi")
plt.xlabel("year of admission")
plt.ylabel("sgpi")
# Display the chart
plt.show()
```
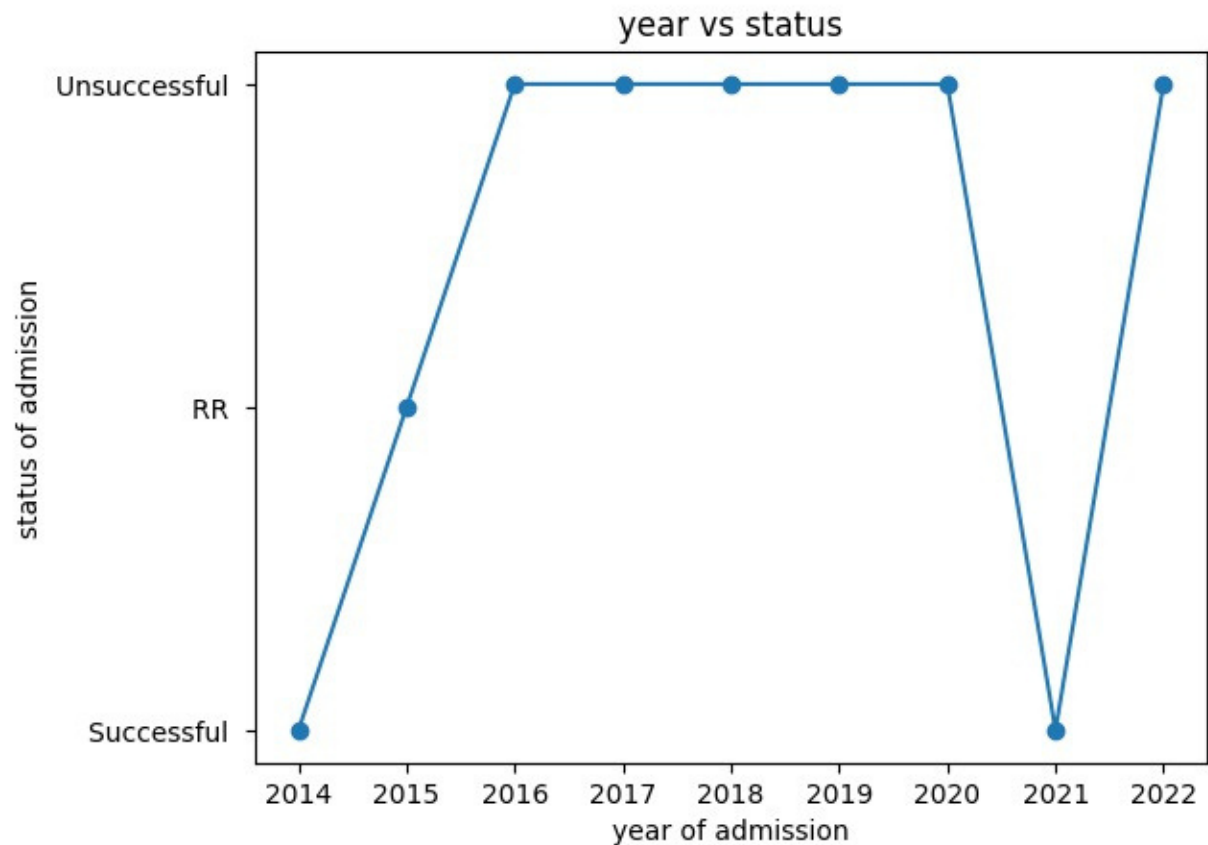
year of admission vs sgpi
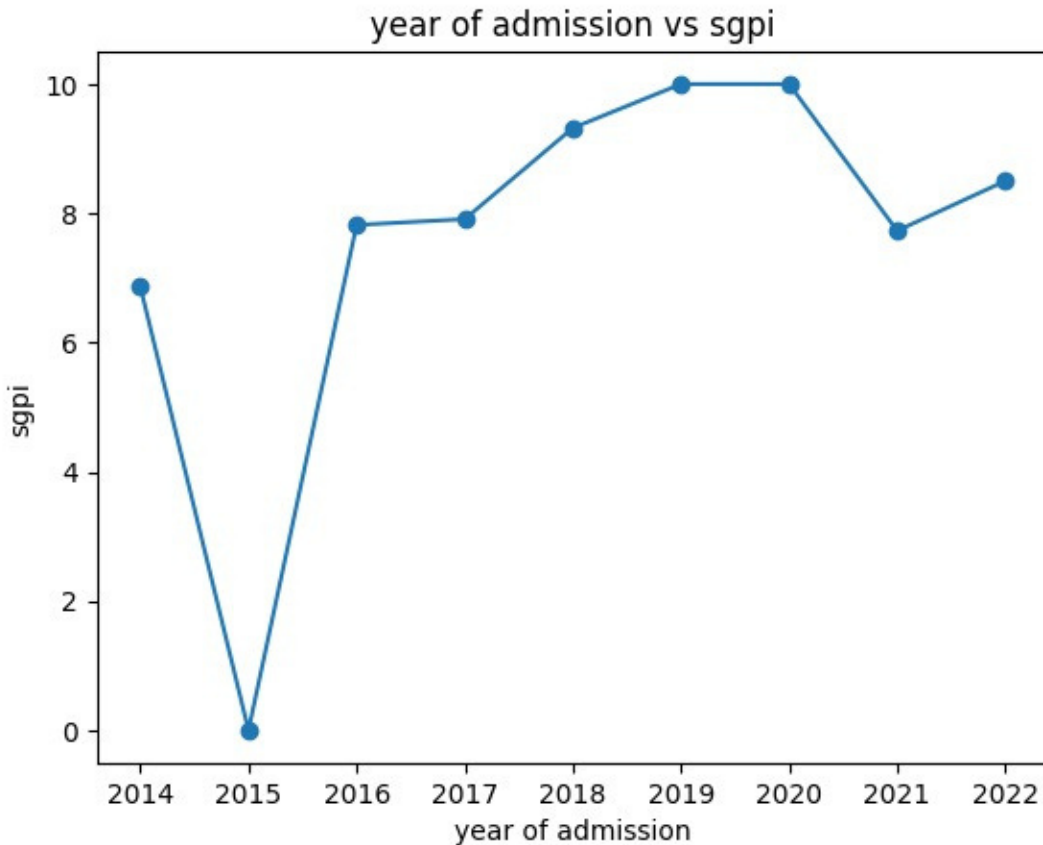
```
b=df["sgpi"]
plt.hist(b, bins=5, edgecolor='black')
# Adding labels and title
plt.xlabel('sgpi')
plt.ylabel('Frequency of sgpi')
plt.title('frequency of sgpi')
# Displaying the histogram
plt.show()
```
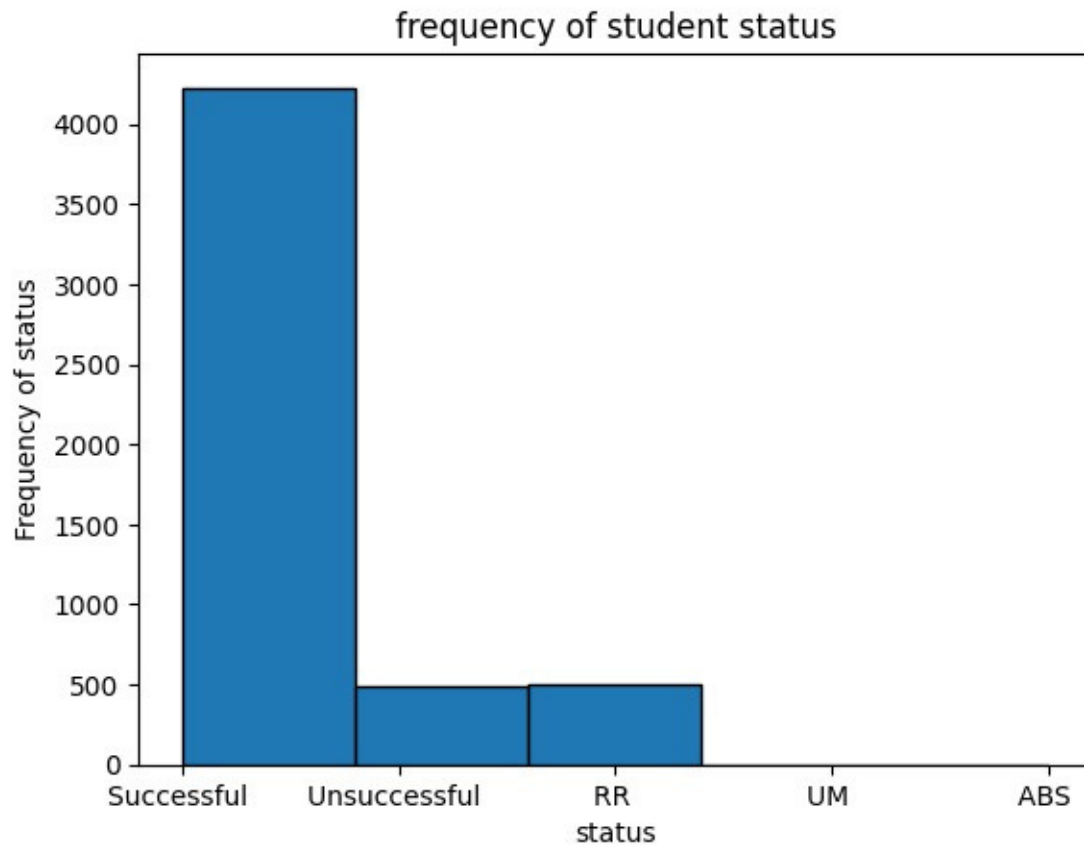
frequency of sgpi
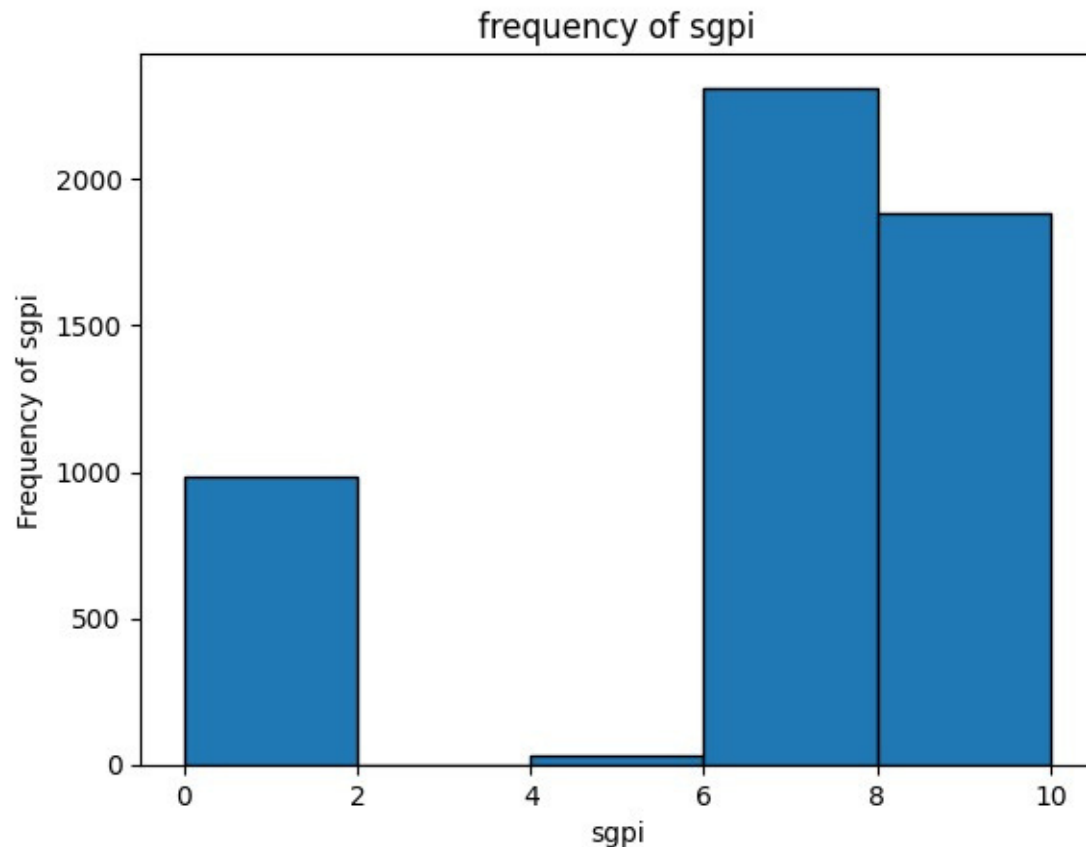
```python
import matplotlib.pyplot as plt
# Example data
df1 = df.groupby('year_of_admission').max()
# Plotting the pie chart
plt.pie(df1['sgpi'],labels=df1.index,
autopct='%1.1f%%')
# Adding a title
plt.title('sgpi% in year')
# Displaying the pie chart
plt.show()
```
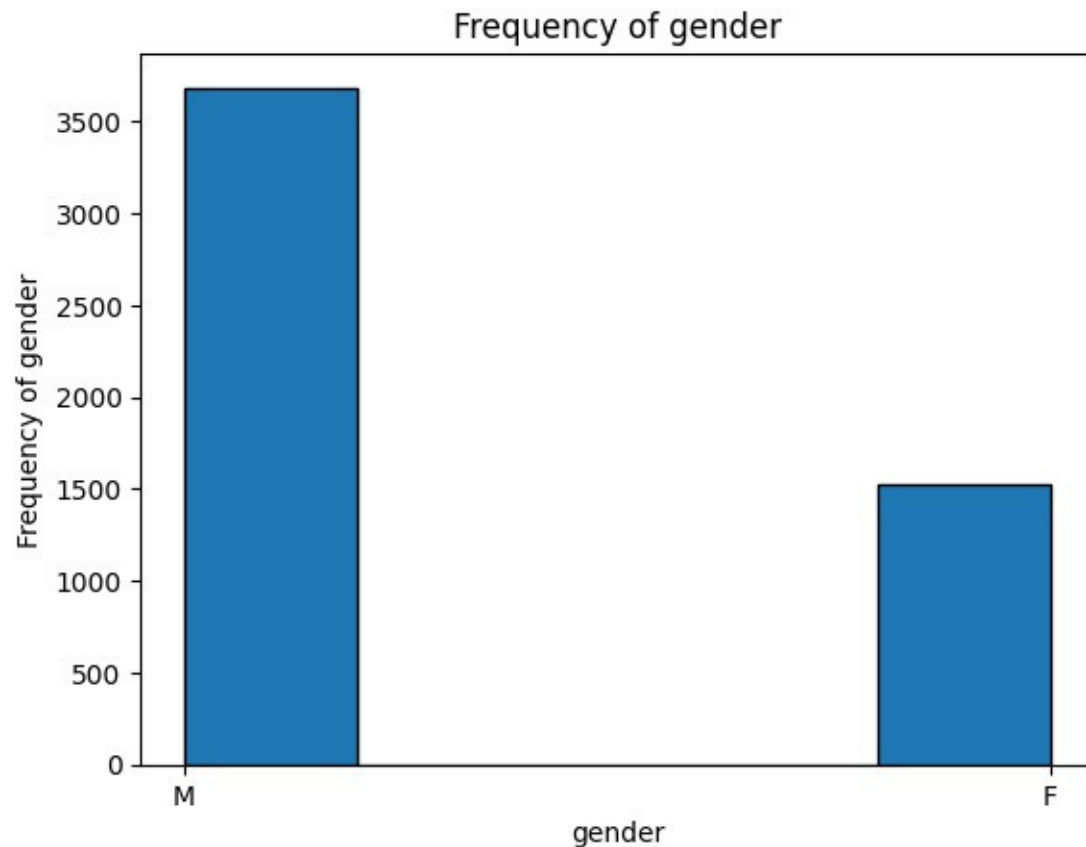
sgpi% in year
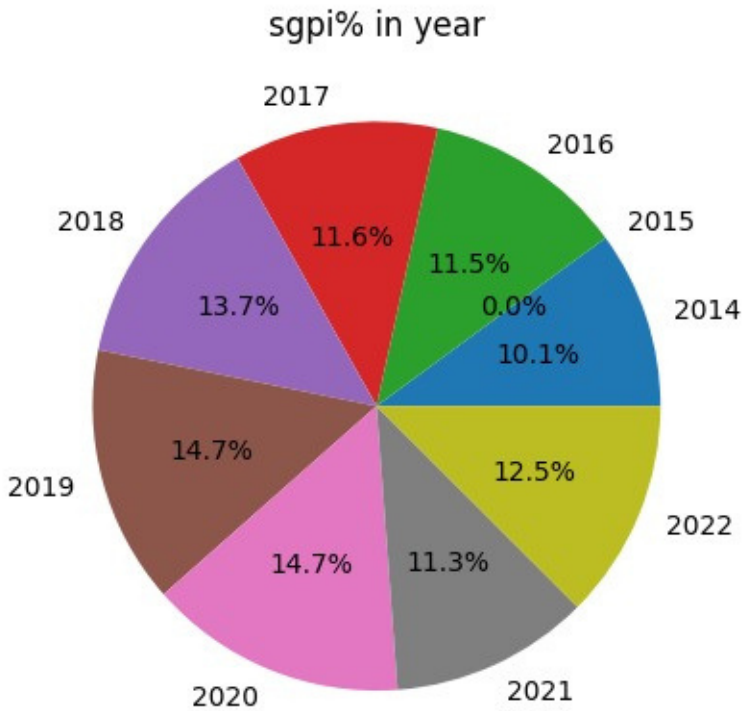
```
df1 = df.groupby('year_of_admission').max()
plt.plot(df1.index, df1['status'], marker='o')
# Customize the chart
plt.title("year vs status")
plt.xlabel("year of admission")
plt.ylabel("status of admission")
# Display the chart
plt.show()
```

year vs status

```
b=df["status"]
plt.hist(b, bins=5, edgecolor='black')
# Adding labels and title
plt.xlabel('status')
plt.ylabel('Frequency of status')
plt.title('frequency of student status')
# Displaying the histogram
plt.show()
```

frequency of student status

```
b=df["gender"]
plt.hist(b, bins=5, edgecolor='black')
# Adding labels and title
plt.xlabel('gender')
plt.ylabel('Frequency of gender')
plt.title('Frequency of gender')
# Displaying the histogram
plt.show()
```

Frequency of gender

```
df1 = df.groupby('year_of_admission').max()
plt.plot(df1.index, df1['clg_id'], marker='o')
# Customize the chart
plt.title("year vs id")
plt.xlabel("year of admission")
plt.ylabel("Clg id")
# Display the chart
plt.show()
```
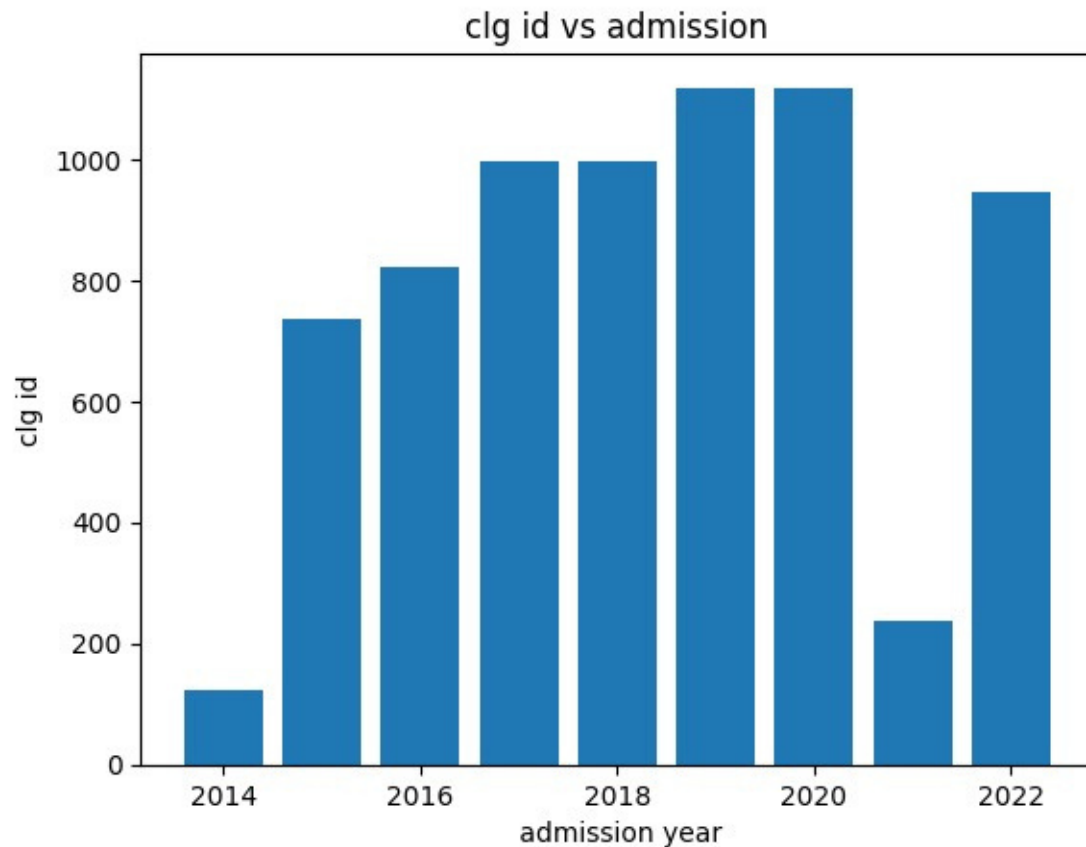
year vs id
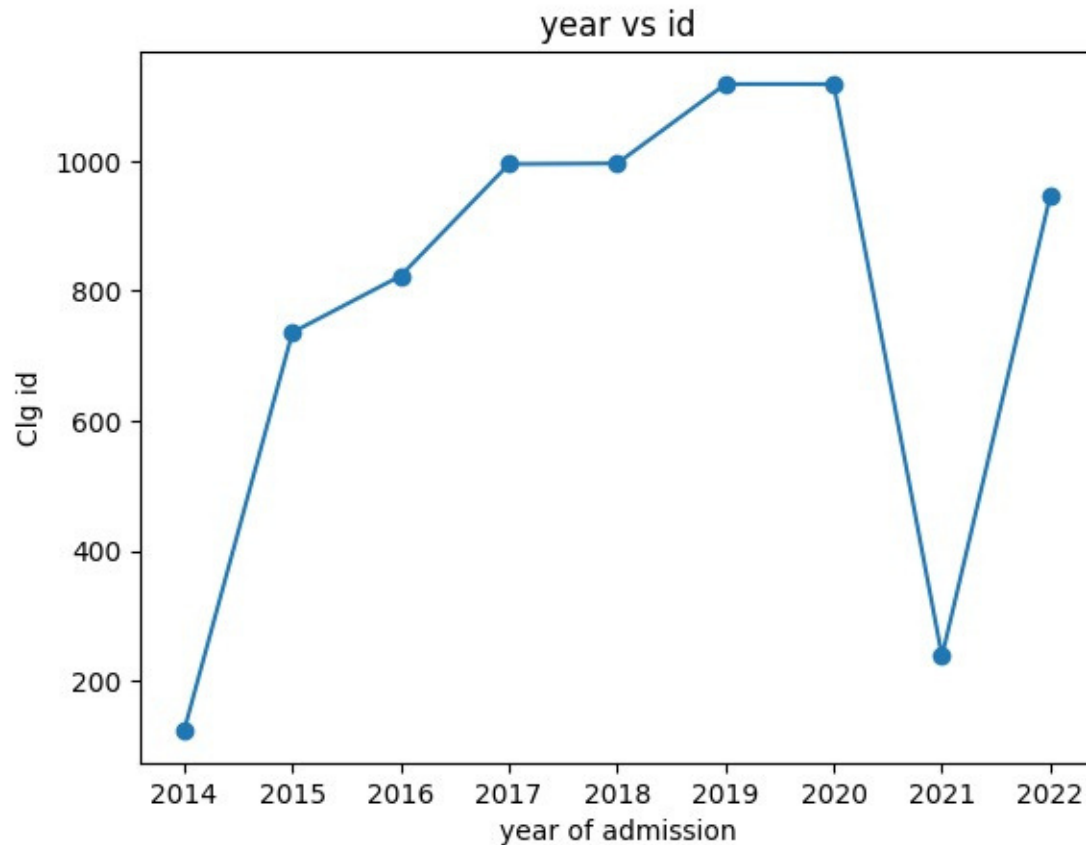
```
df1 = df.groupby('status').max()
plt.bar(df1.index, df1['clg_id'])
# Customize the chart
plt.title("status vs id")
plt.xlabel("status")
plt.ylabel("clg id")
# Display the chart
plt.show()
```
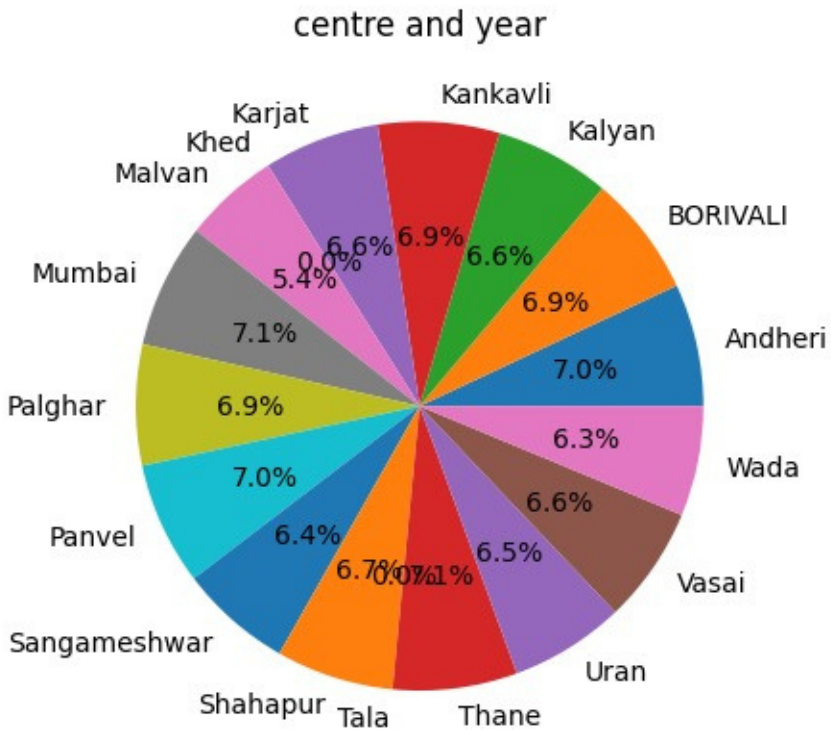
status vs id
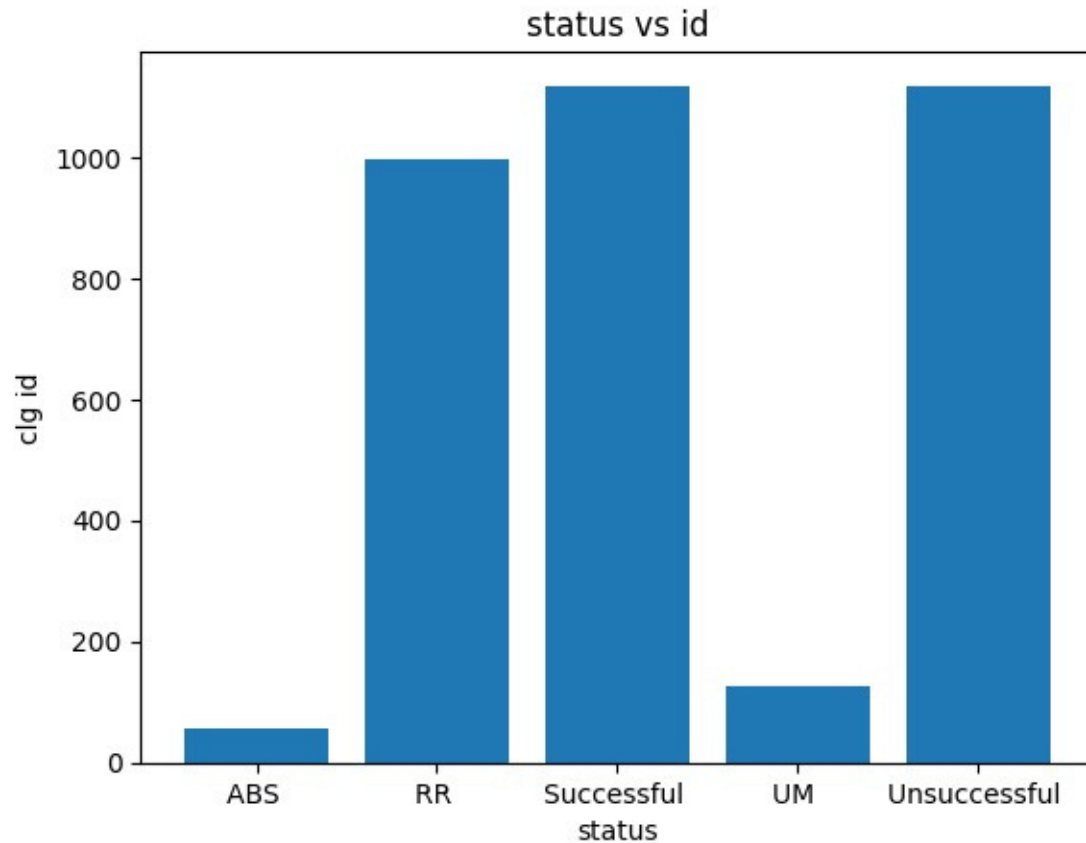
```
df1 = df.groupby('year_of_admission').max()
plt.bar(df1.index, df1['total_gradepoints'])
# Customize the chart
plt.title("year vs total grade points")
plt.xlabel("year of admission")
plt.ylabel("total grade points")
# Display the chart
plt.show()
```
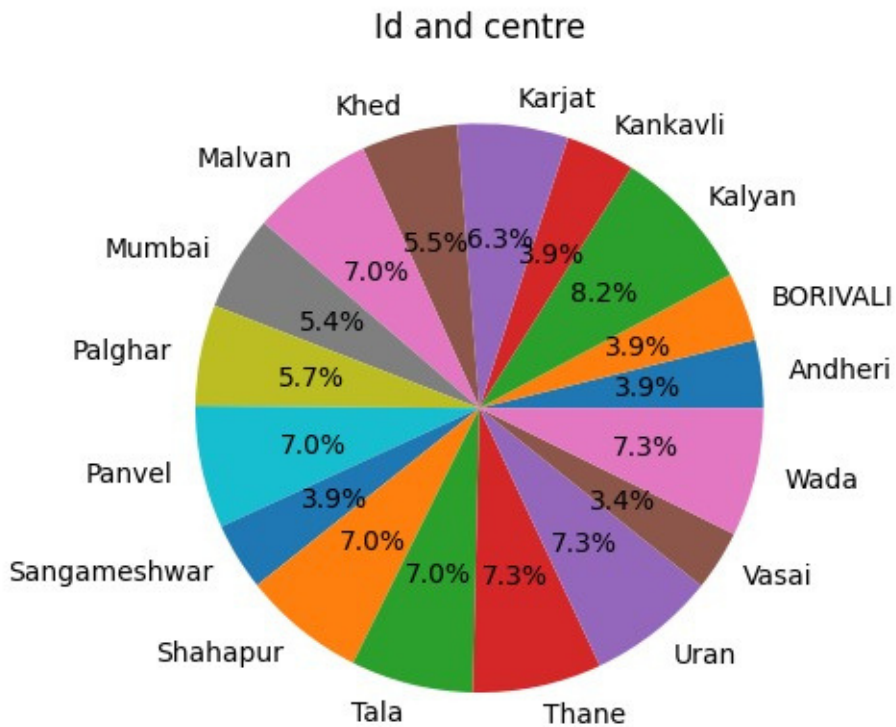
## year vs total grade points
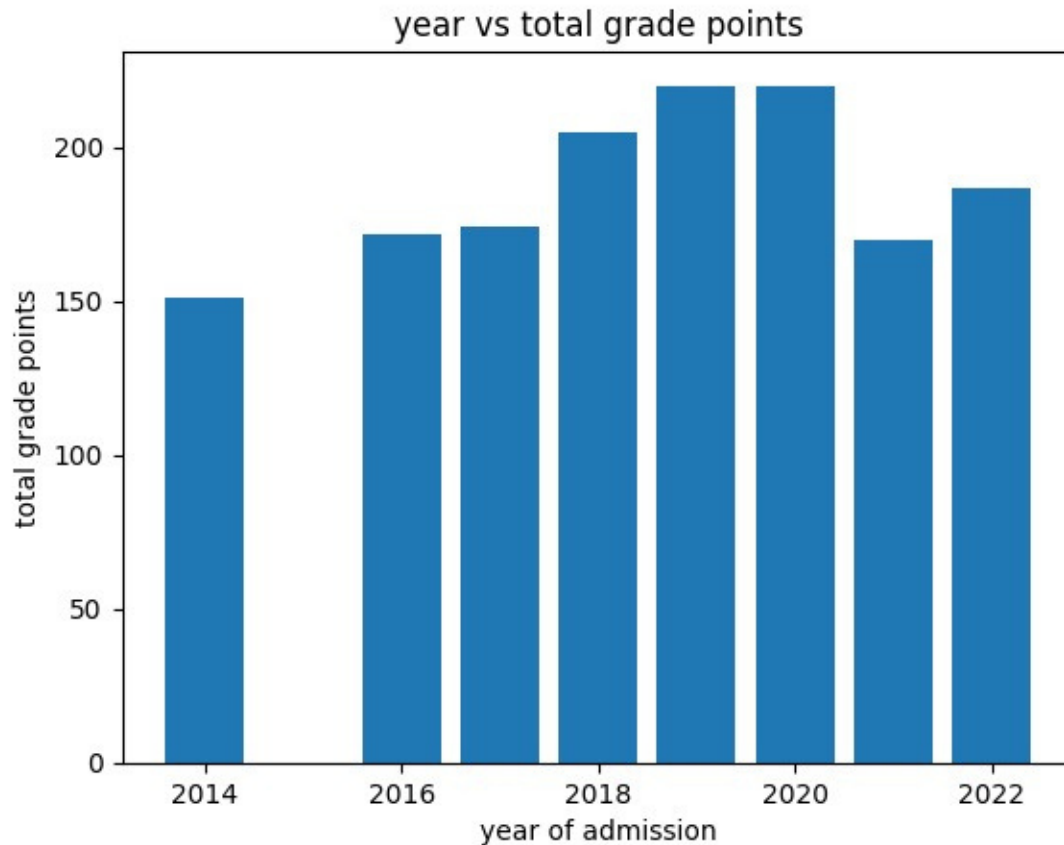


```
df1 = df.groupby('year_of_admission').max()
plt.bar(df1.index, df1['clg_id'])
# Customize the plot
plt.title("clg id vs admission") plt.xlabel("
admission year") plt.ylabel("clg id")
# Display the plot
plt.show()
```

clg id vs admission

```
# Example data
df1 = df.groupby('centre').max()
# Plotting the pie chart
plt.pie(df1['sgpi'],labels=df1.index,
autopct='%1.1f%%')
# Adding a title
plt.title('centre and year')
# Displaying the pie chart
plt.show()
```

centre and year

```python
import matplotlib.pyplot as plt
# Example data
df1 = df.groupby('centre').max()
# Plotting the pie chart
plt.pie(df1['clg_id'],labels=df1.index,
autopct='%1.1f%%')

# Adding a title
plt.title('Id and centre')
# Displaying the pie chart
plt.show()
```
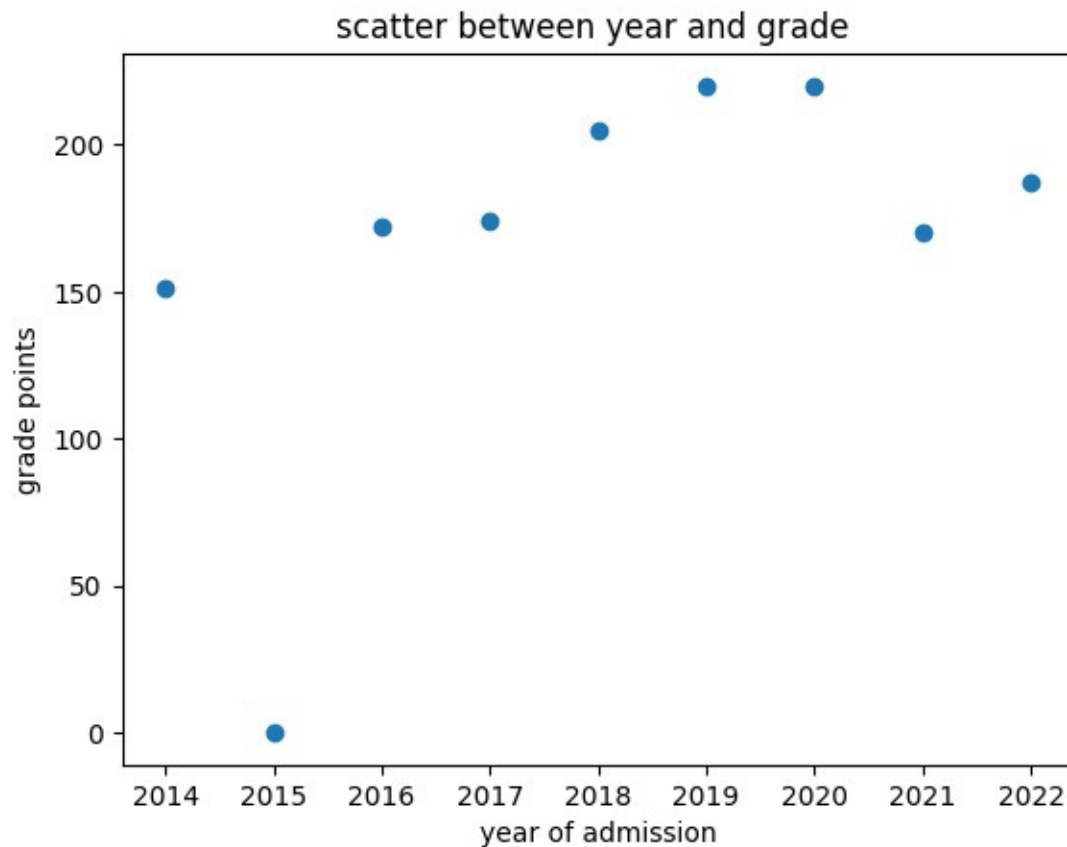
Id and centre

```
df1 = df.groupby('status').max() plt.scatter(df1.index,
df1['total_gradepoints'])
# Customize the chart
plt.title("scatter between status and grade point")
plt.xlabel("status")
plt.ylabel("total grade point")
# Display the chart
plt.show()
```
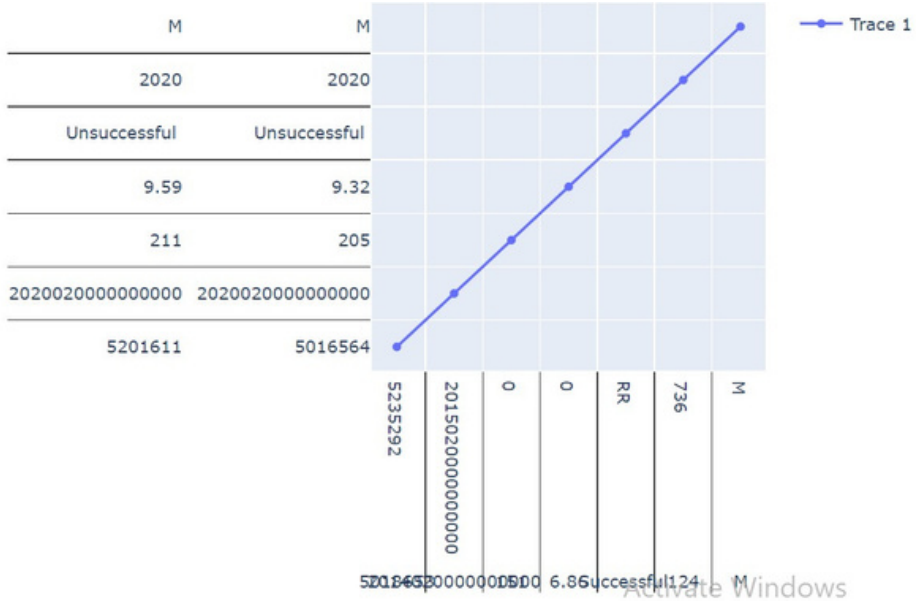
scatter between status and grade point
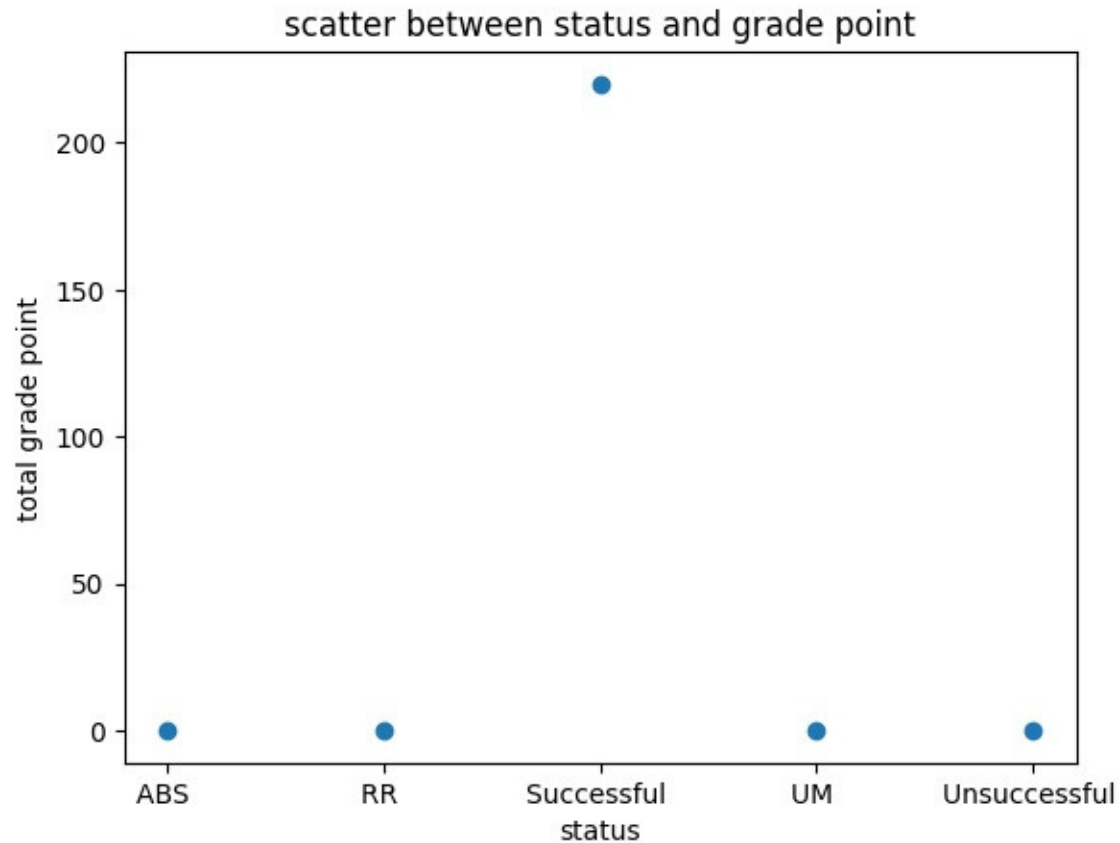
```
df1 = df.groupby('year_of_admission').max()
plt.scatter(df1.index, df1['total_gradepoints'])
# Customize the chart
plt.title("scatter between year and grade ")
plt.xlabel("year of admission")
plt.ylabel("grade points")
# Display the chart
plt.show()
```

scatter between year and grade

```
df1 = df.groupby('clg_id').max()
plt.scatter(df1.index, df1['sgpi'])
# Customize the chart
plt.title("scatter  between  id  and  sgpi")
plt.xlabel("clg id")
plt.ylabel("sgpi")
# Display the chart
plt.show()
```

scatter between id and sgpi
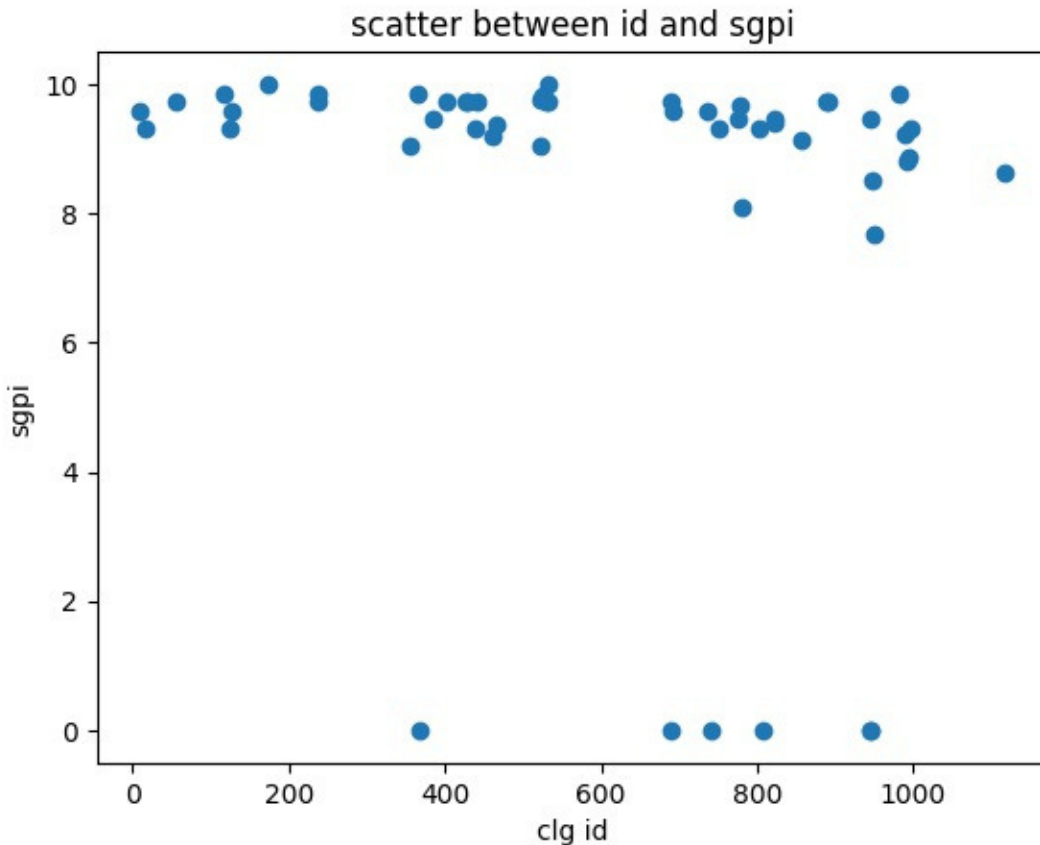
```
import plotly.graph_objects as go
import plotly.subplots as sp
# Create data for the panels
x =df.groupby('year_of_admission').max(); y1 =
df.groupby('sgpi').max(); y2 =df.groupby('total_gradepoints');
y3 = df.groupby('clg_id').max()
# Create subplots with panels
fig = sp.make_subplots(rows=1, cols=3, subplot_titles=( 'Panel
'))
# Add traces to each panel
fig.add_trace(go.Scatter(x=x, y=y3, name='Trace 1'), row=1,
col=3)
# Update layout and display the plot
fig.update_layout(showlegend=True)
fig.show()
```

| M | M |
|---|---|
| 2020 | 2020 |
| Unsuccessful | Unsuccessful |
| 9.59 | 9.32 |
| 211 | 205 |
| 2020020000000000 | 2020020000000000 |
| 5201611 | 5016564 |



Trace 1