task1

April 30, 2024

[1]:
```
#Import all needed libraries for the visualisation of data
import pandas as pd
import matplotlib.pyplot as plt
```

[7]:
```
#Load and Read the Dataset
import pandas as pd

# Load and Read the Dataset
data = pd.read_csv("C:/Users/aakas/OneDrive/Desktop/Rprog/study_performance.
 ↪csv")
```

[8]:
```
#Display the first few rows of the Dataset
print(data.head())
```

```
   gender race_ethnicity parental_level_of_education         lunch  \
0  female        group B           bachelor's degree      standard
1  female        group C                some college      standard
2  female        group B            master's degree      standard
3    male        group A          associate's degree  free/reduced
4    male        group C                some college      standard

  test_preparation_course  math_score  reading_score  writing_score
0                    none          72             72             74
1               completed          69             90             88
2                    none          90             95             93
3                    none          47             57             44
4                    none          76             78             75
```

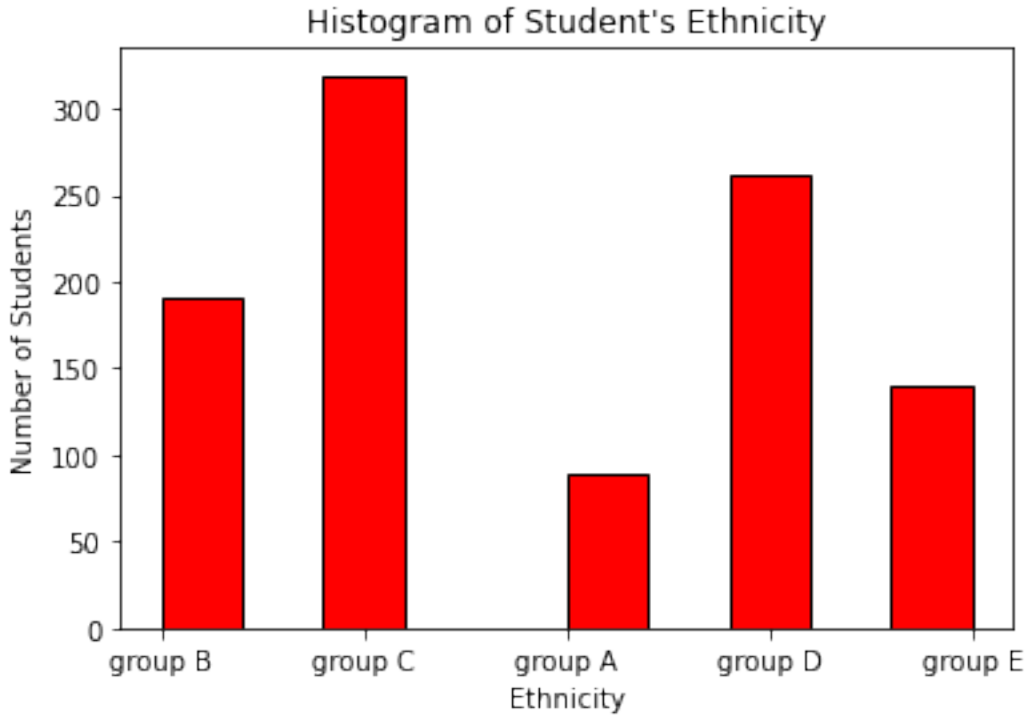
[9]:
```
#Display the last few rows of the Dataset
print(data.tail())
```

```
     gender race_ethnicity parental_level_of_education         lunch  \
995  female        group E            master's degree      standard
996    male        group C                high school  free/reduced
997  female        group C                high school  free/reduced
998  female        group D               some college      standard
999  female        group D               some college  free/reduced
```

	test_preparation_course	math_score	reading_score	writing_score
995	completed	88	99	95
996	none	62	55	55
997	completed	59	71	65
998	completed	68	78	77
999	none	77	86	86

[10]:
```
#Plotting Histogram of the Student's Ethnicity in the Population
plt.hist(data['race_ethnicity'], color='red', edgecolor='black')

plt.xlabel('Ethnicity')
plt.ylabel('Number of Students')
plt.title("Histogram of Student's Ethnicity")
plt.show()
```



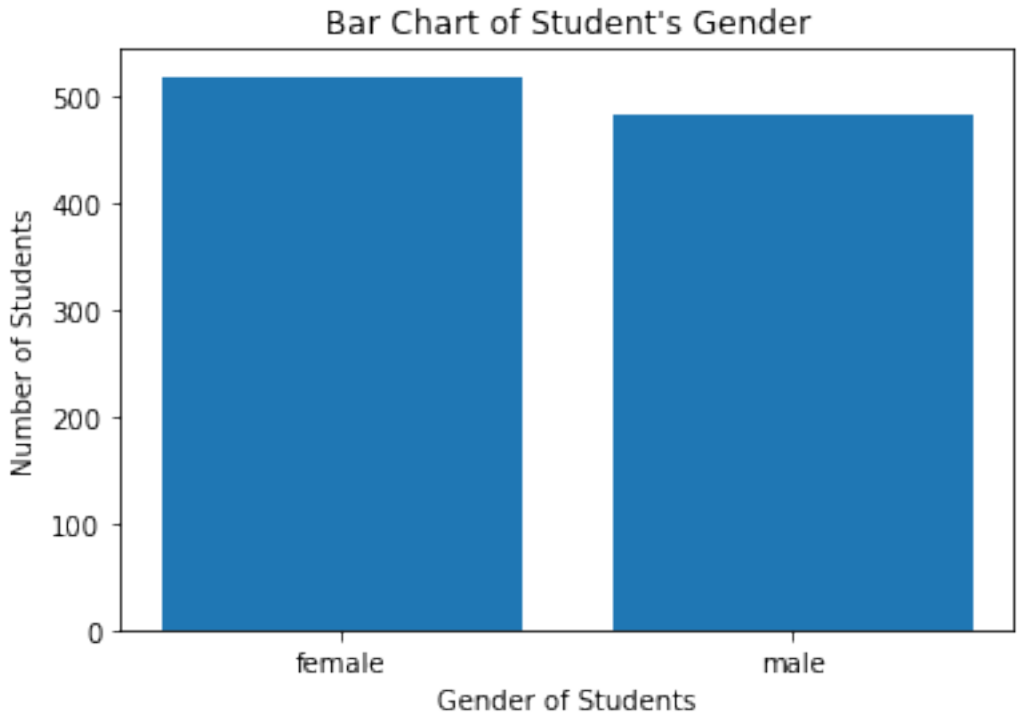
[11]:
```
#Plotting Bar Chart of Student's Genders

# Count the occurrences of each gender
gender_counts = data['gender'].value_counts()

# Extract the categories and counts
categories = gender_counts.index
counts = gender_counts.values
```

```
# Create bar chart
plt.bar(categories, counts)

plt.xlabel('Gender of Students')
plt.ylabel('Number of Students')
plt.title("Bar Chart of Student's Gender")
plt.show()
```



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