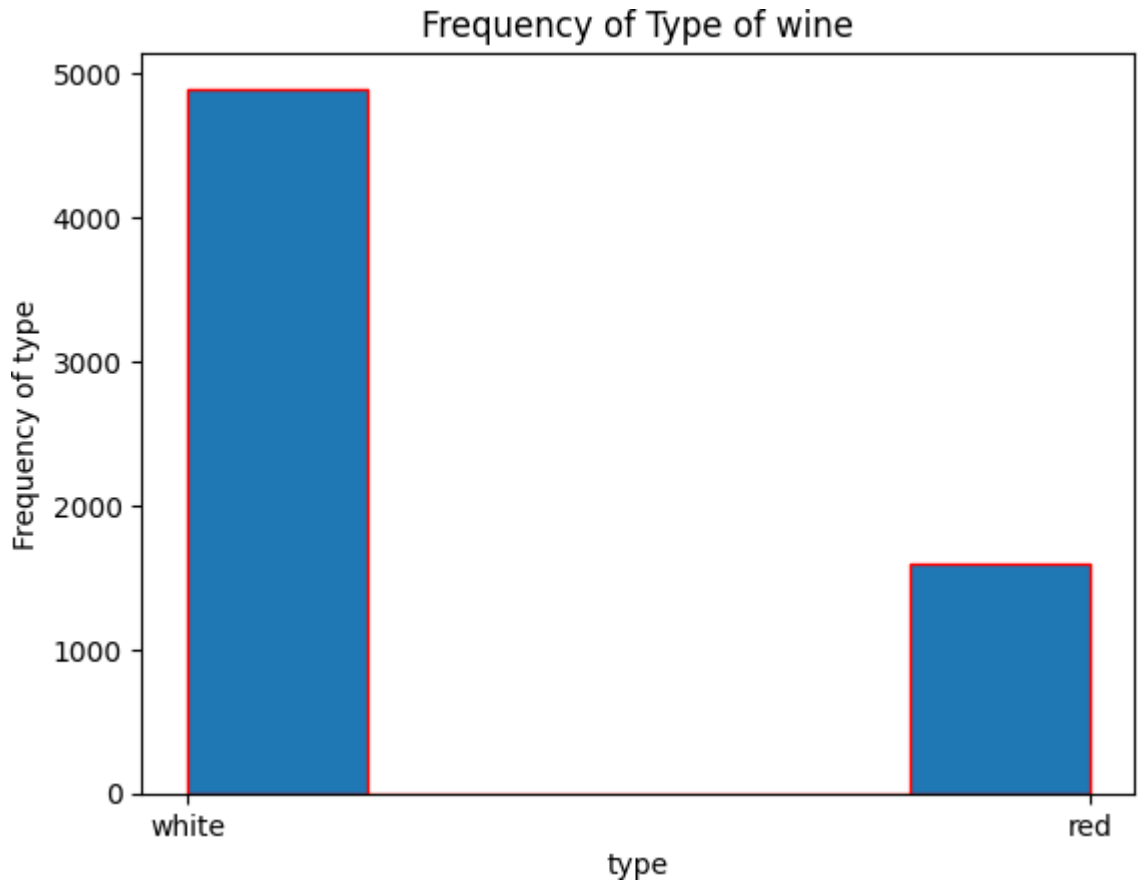
EDS Assignment No. 5

Code:-

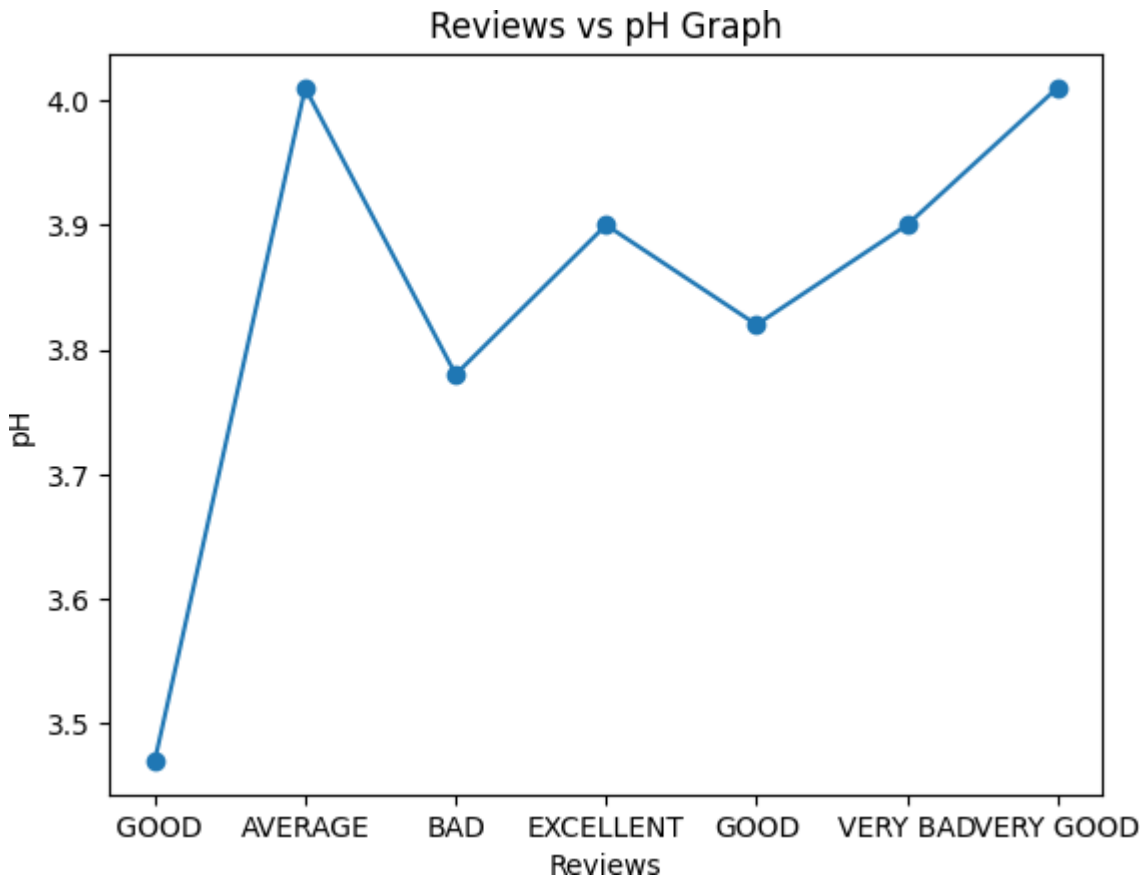
1)

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



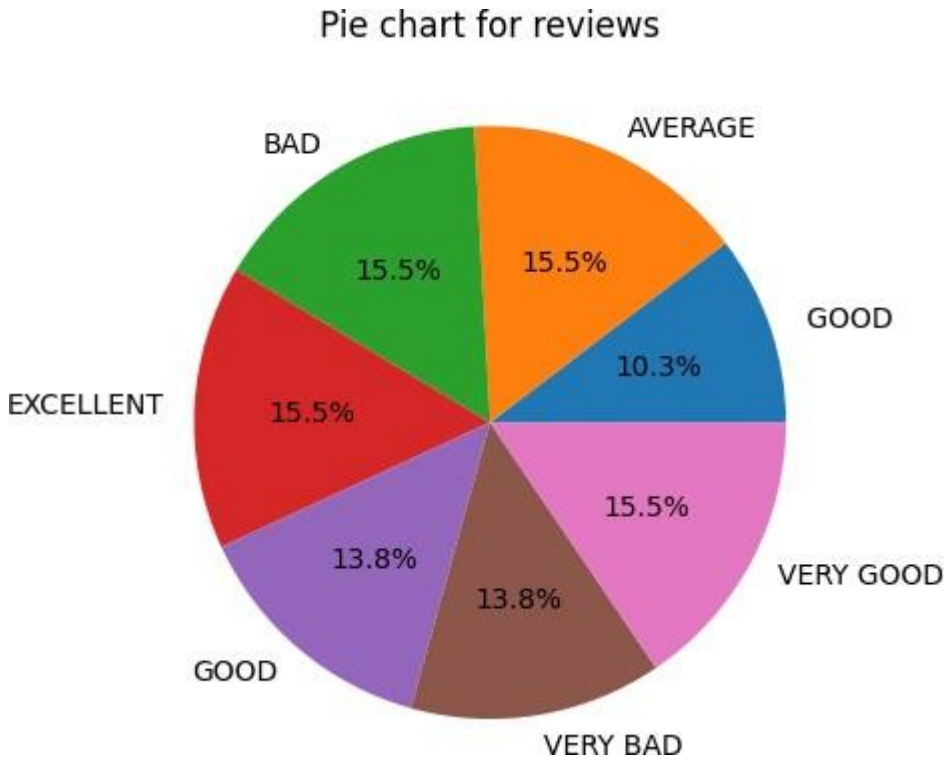
2)

```
df1 = df.groupby('reviews').max()
plt.plot(df1.index, df1['pH'], marker='o')
# Customize the chart
plt.title("Reviews vs pH Graph")
plt.xlabel("Reviews")
plt.ylabel("pH")
# Display the chart
plt.show()
```



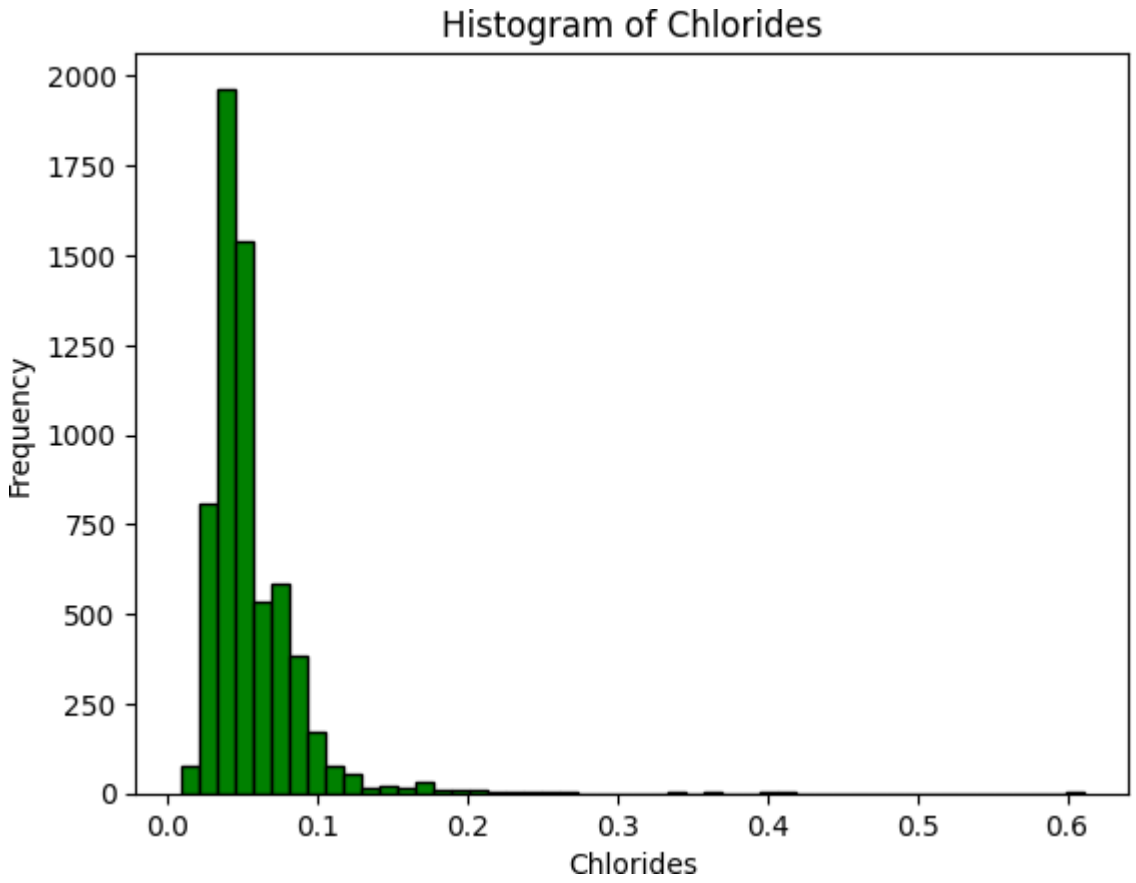
3)

```
df2=df.groupby('reviews').max()
plt.pie(df2['quality'],labels=df2.index,autopct='%1.1f%%')
plt.title('Pie chart for reviews')
plt.show()
```



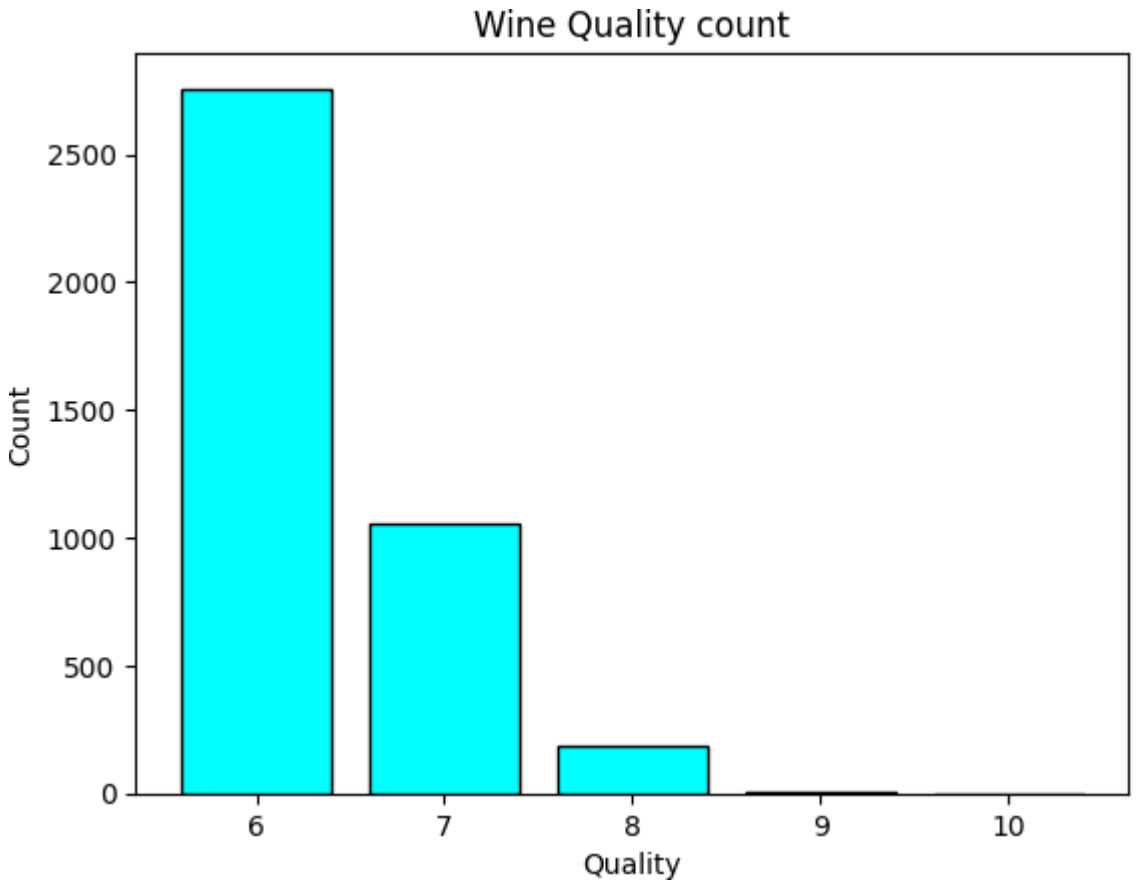
4)

```
num = df['chlorides'].astype('float')

# Plotting the histogram
plt.hist(num,bins=50,  edgecolor='black', color='green')

# Adding labels and title
plt.xlabel('Chlorides')
plt.ylabel('Frequency')
plt.title('Histogram of Chlorides')

# Displaying the histogram
plt.show()
```



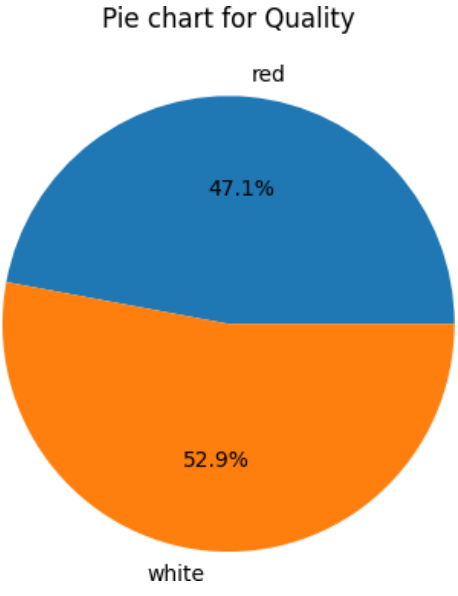
5)

```
qual = list(df['quality'].astype('int64'))
count_6 = qual.count(6)
count_7 = qual.count(7)
count_8 = qual.count(8)
count_9 = qual.count(9)
count_10 = qual.count(10)

qrate = ['6', '7', '8', '9','10']
count = [count_6, count_7, count_8, count_9, count_10]

# Create a bar plot
plt.bar(qrate, count, color='cyan', edgecolor='black')

# Customize the plot
plt.title("Wine Quality count")
plt.xlabel("Quality")
plt.ylabel("Count")

# Display the plot
plt.show()
```



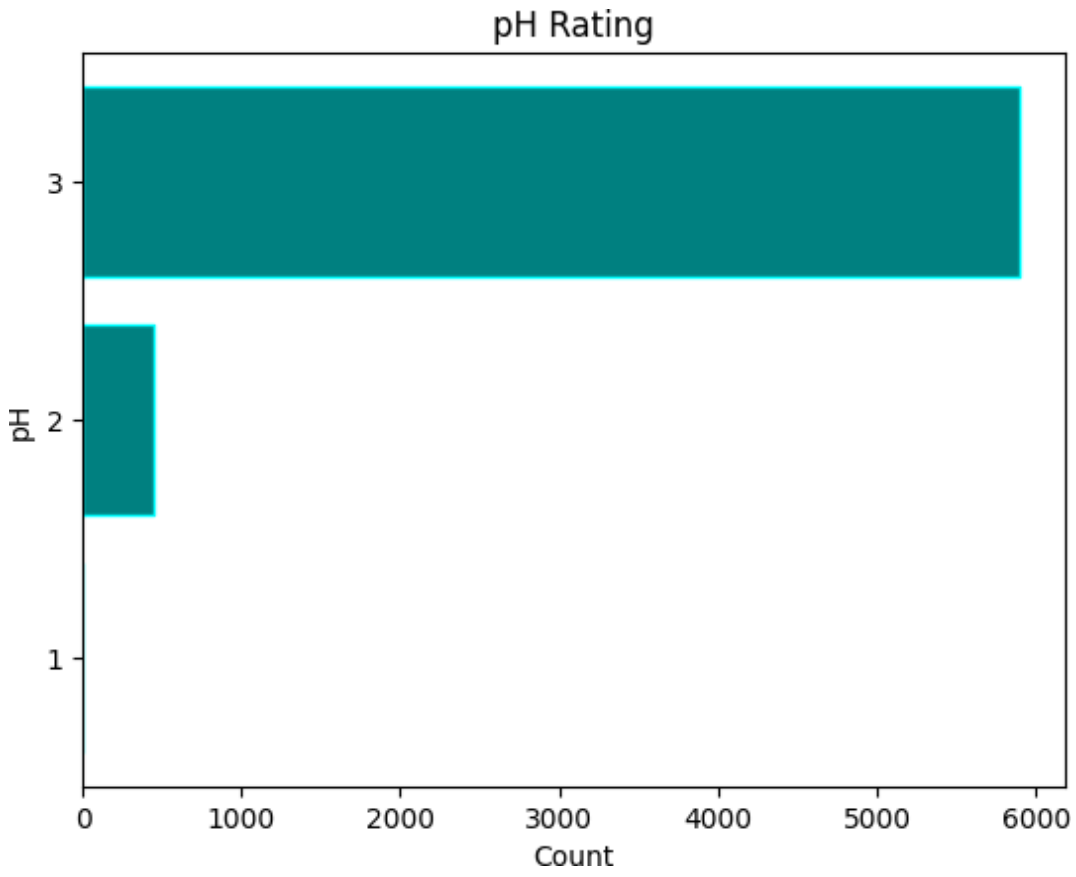
6)

```
df1=df.groupby('type').max()
plt.pie(df1['quality'],labels=df1.index,autopct='%1.1f%%')
plt.title('Pie chart for Quality')
plt.show()
```



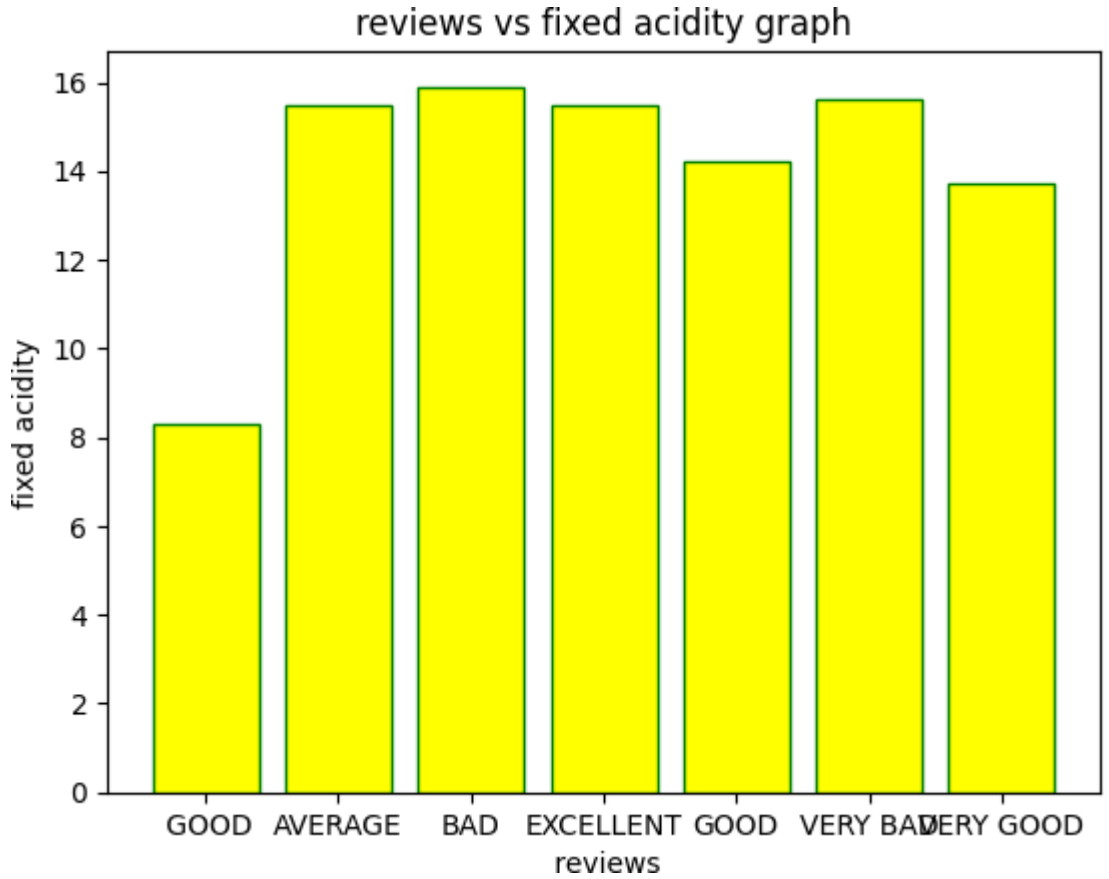
7)

```
K = list(df['pH'].astype('int64'))

count_2 = K.count(1)
count_3 = K.count(2)
count_4 = K.count(3)


imdb = [ '1', '2','3']
count = [ count_2, count_3,count_4]

# Create a bar plot
plt.barh(imdb, count, color='teal', edgecolor='cyan')

# Customize the plot
plt.title("pH Rating")
plt.xlabel("Count")
plt.ylabel("pH")

# Display the plot
plt.show()
```



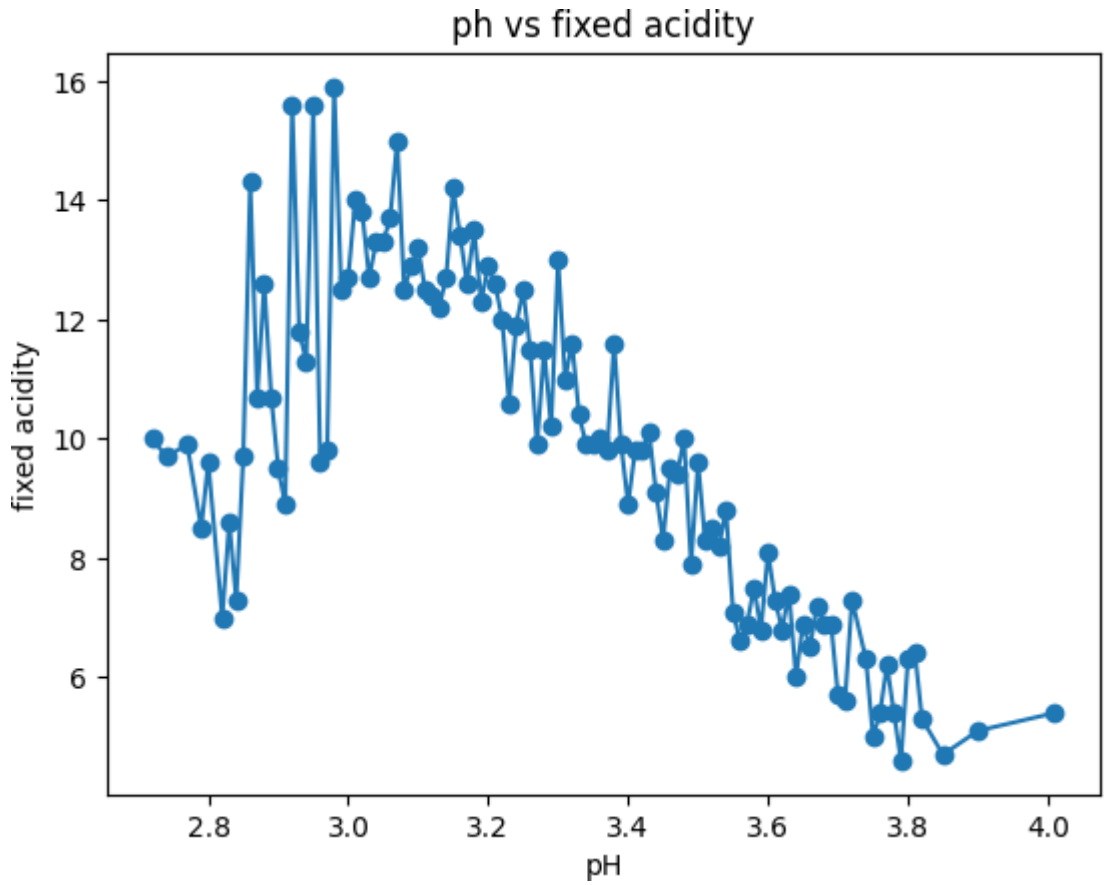
8)

```
df1 = df.groupby('reviews').max()
plt.bar(df1.index, df1['fixed acidity'],
color='yellow',edgecolor='green')
# Customize the plot
plt.title("reviews vs fixed acidity graph")
plt.xlabel(" reviews")
plt.ylabel("fixed acidity")
# Display the plot
plt.show()
```



9)

```
df1 = df.groupby('pH').max()
plt.plot(df1.index, df1['fixed acidity'], marker='o')
# Customize the chart
plt.title("ph vs fixed acidity")
plt.xlabel("pH")
plt.ylabel("fixed acidity")
# Display the chart
plt.show()
```



10)

```
fixed = [1,2,3,4,5,6,7,8,9,10]
user = (df['fixed acidity'][0:10]).astype('int64')

# Plotting the scatter plot
plt.scatter(fixed, user, color='lime')

# Adding labels and title
plt.xlabel('Number')
plt.ylabel('Fixed Acidity')
plt.title('Number of Fixed Acidity')

# Displaying the scatter plot
plt.show()
```