In [1]:
```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import csv

def regline(x,y):
    plt.bar(x,y,label = "AMCEC admission")
    plt.xlabel('year')
    plt.ylabel('nos')
    plt.scatter(x,y,c='red')
    plt.show()
    mx=np.mean(x)
    my=np.mean(y)
    n=len(x)
    up=0
    M=0
    dw=0
    for i in range(n):
        up+=(x[i]-mx)*(y[i]-my)
        dw+=(x[i]-mx)**2

    M=up/dw
    c=my-(M*mx)
    print("linear regression slope =",M)
    print("linear regression constant =",c)
    max_x=np.max(x)+1
    min_x=np.min(x)-1
    #print(max_x)
    x1=0
    x1=np.linspace(min_x,max_x,6)

    y1=M*x1+c
    plt.plot(x1,y1,color='blue')
    print(x)
    plt.scatter(x,y,c='red')
    plt.show()
    print("Enter which year admission prediction")
    year = int(input())
    adm = M*year+c
    print("Predicted admission =",adm)

def main():
    file=r"C:\Users\AMC College\Desktop\DATA SET\AMCEC.csv"
    data=pd.read_csv(file)
    display(data)
    x=data['year'].values
    y=data['nos'].values
    regline(x,y)


main()
```
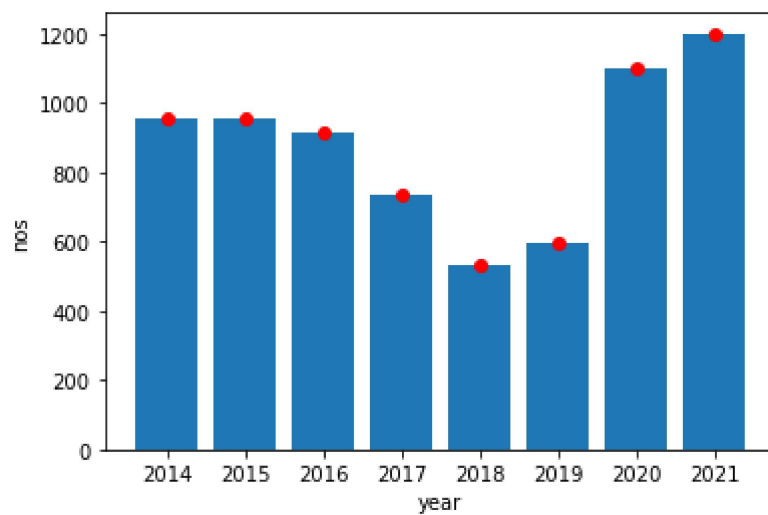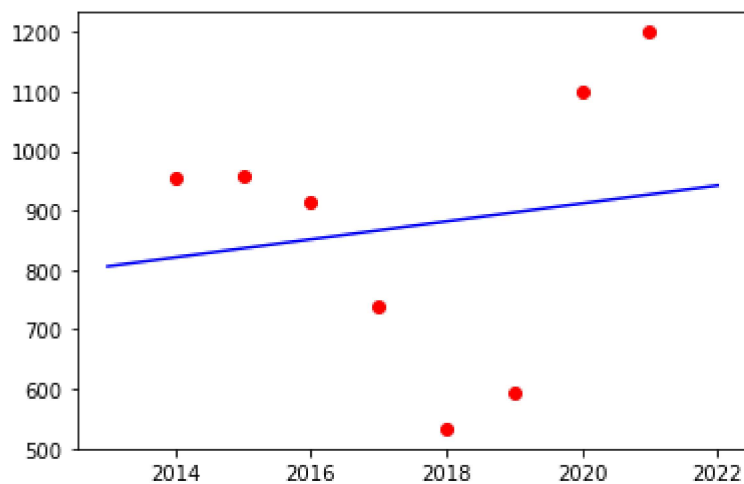
	year	nos
0	2014	955
1	2015	957
2	2016	914
3	2017	737
4	2018	533
5	2019	595
6	2020	1100
7	2021	1200


```
linear regression slope = 15.107142857142858
linear regression constant = -29604.785714285714
[2014 2015 2016 2017 2018 2019 2020 2021]
```



```
Enter which year admission prediction
2022
Predicted admission = 941.8571428571449
```

In [ ]:

In [ ]: