PROBLEM STATEMENT

Q1.What was the best month for sales>How much entered that month?

months=range(1,13)

plt.bar(months,results['Sales'])

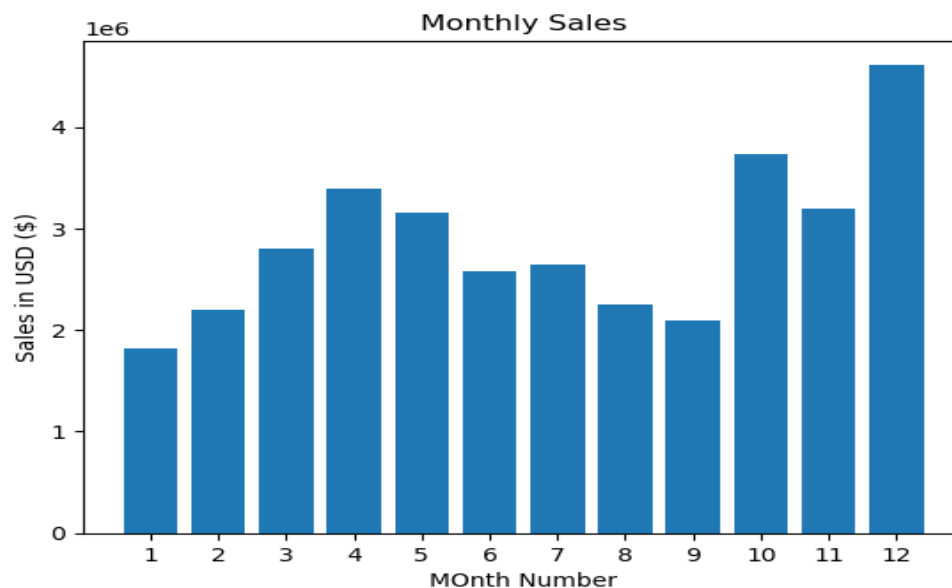**plt.title('Monthly Sales')**

plt.xticks(months)

plt.ylabel('Sales in USD ($)')

plt.xlabel("MOnth Number")

plt.show()

Which city having highest number of sales?

```
# Adding city columns

def get_city(address):

    return address.split(',')[1]


def get_state(address):

    return address.split(',')[2].split(' ')[1]


data['City']=data['Purchase Address'].apply(lambda x:get_city(x)+'('+get_state(x)+')')

data.head()
```

City	Quantity Ordered	Price Each	Sales
Atlanta(GA)	16602	2779908.250	2.795499e+06
Austin(TX)	11153	1809873.625	1.819582e+06
Boston(MA)	22528	3637409.750	3.661642e+06
Dallas(TX)	16730	2752627.750	2.767975e+06
Los Angeles(CA)	33289	5421435.000	5.452571e+06
New York City(NY)	27932	4635371.000	4.664317e+06
Portland(ME)	2750	447189.250	4.497583e+05
Portland(OR)	11303	1860558.250	1.870732e+06
San Francisco(CA)	50239	8211461.500	8.262204e+06
Seattle(WA)	16553	2733296.000	2.747755e+06

Q . Monthly Sales By city?

```
cities=[city for city,df in data.groupby('City')]

plt.bar(cities,highest_city_sales['Sales'])

plt.title('Monthly Sales')

plt.xticks(cities,rotation='vertical',size=8)

plt.ylabel('Sales in USD ($)')

plt.xlabel("City Names")

plt.show()
```
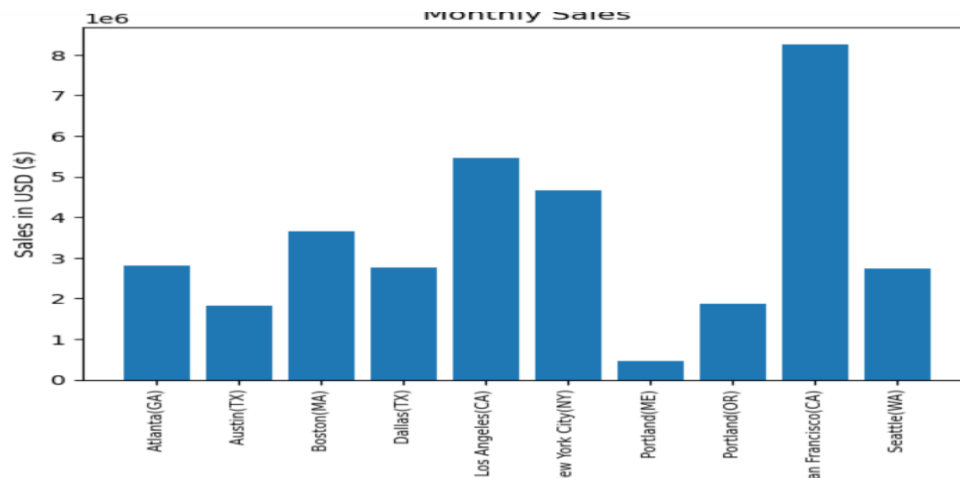
Monthly Sales

Q3. What time should we display advertisements to maximize likehood of customer's buying product?

```
hurs=[hurs for hurs,df in data.groupby('Hour')]
plt.plot(hurs,data.groupby(['Hour']).count())
plt.xticks(hurs)
plt.grid()
plt.show()
```