In [70]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

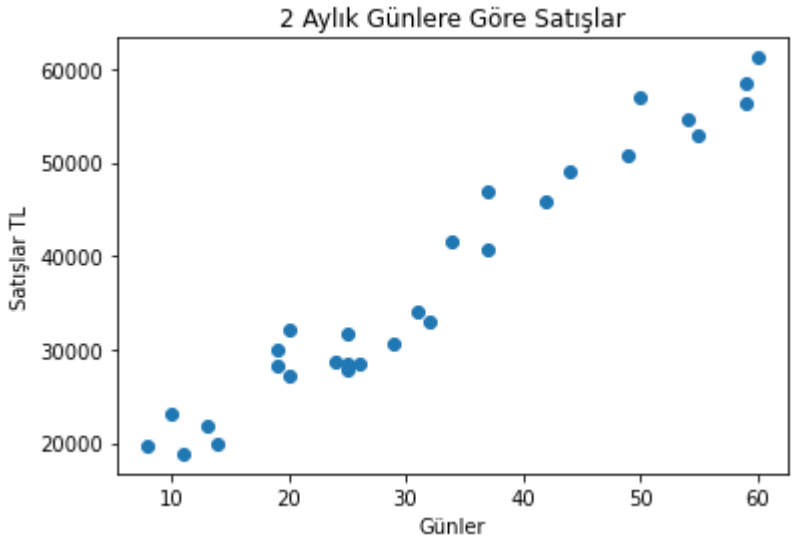
In [71]:

```
data = pd.read_csv("satislar.csv")
X = data["Aylar"].values  # bağımsız değişken
Y = data["Satislar"].values  # bağımlı değişken
data
```

Out[71]:

	Aylar	Satislar
0	8	19671.5
1	10	23102.5
2	11	18865.5
3	13	21762.5
4	14	19945.5
5	19	28321.0
6	19	30075.0
7	20	27222.5
8	20	32222.5
9	24	28594.5
10	25	31609.0
11	25	27897.0
12	25	28478.5
13	26	28540.5
14	29	30555.5
15	31	33969.0
16	32	33014.5
17	34	41544.0
18	37	40681.5
19	37	46972.0
20	42	45869.0
21	44	49136.5
22	49	50651.0
23	50	56906.0
24	54	54715.5
25	55	52791.0
26	59	58484.5
27	59	56317.5
28	60	61195.5

In [72]:
```
plt.scatter(X,Y)
plt.title("2 Aylık Günlere Göre Satışlar")
plt.xlabel("Günler")
plt.ylabel("Satışlar TL")
plt.show()
```



In [73]:
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(X,Y,test_size=0.2)
x_train = x_train.reshape(-1,1)
x_test = x_test.reshape(-1,1)
y_train = y_train.reshape(-1,1)
y_test = y_test.reshape(-1,1)
```

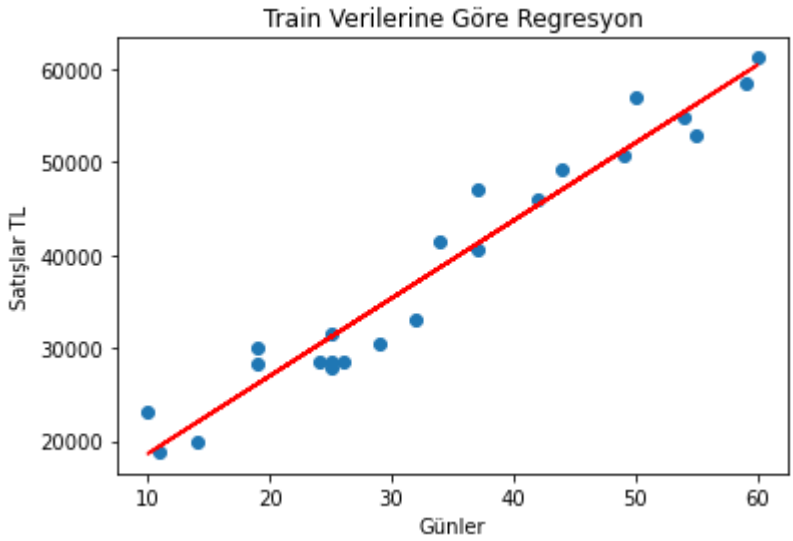
In [74]:
```
from sklearn.linear_model import LinearRegression
linear = LinearRegression()
linear.fit(x_train,y_train)
```

Out[74]:
```
LinearRegression()
```

In [75]:
```
plt.scatter(x_train,y_train)
plt.title("Train Verilerine Göre Regresyon")
plt.xlabel("Günler")
plt.ylabel("Satışlar TL")

tahminler = linear.predict(x_train)
plt.plot(x_train,tahminler,color="red")

plt.show()
```

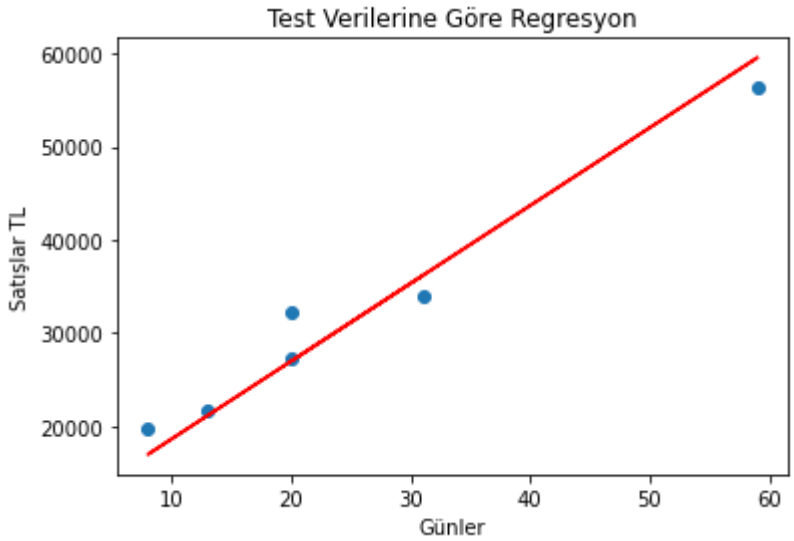


In [77]:

```
plt.scatter(x_test,y_test)
plt.title("Test Verilerine Göre Regresyon")
plt.xlabel("Günler")
plt.ylabel("Satışlar TL")

tahminler = linear.predict(x_test)
plt.plot(x_test,tahminler,color="red")

plt.show()
```



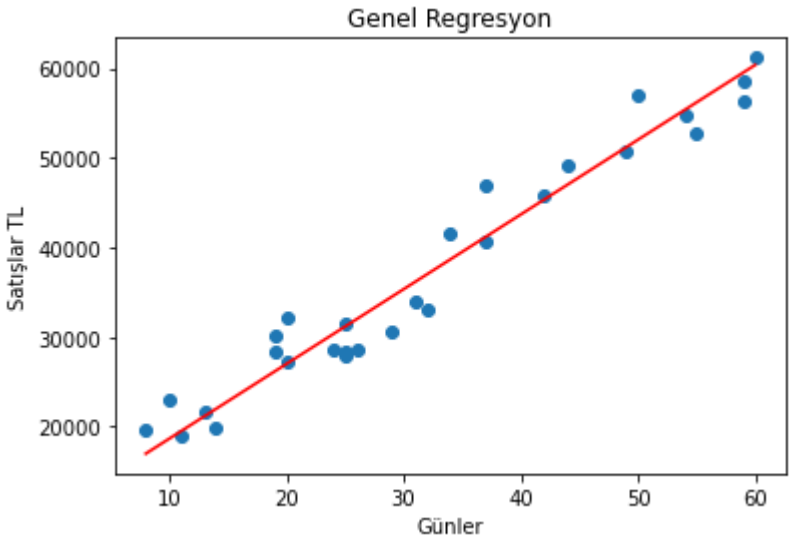
In [82]:

```
X = X.reshape(-1,1)
Y = Y.reshape(-1,1)

plt.scatter(X,Y)
plt.title("Genel Regresyon")
plt.xlabel("Günler")
plt.ylabel("Satışlar TL")

tahminler = linear.predict(X)
plt.plot(X,tahminler,color="red")

plt.show()
```



In [87]:
```
# Tekli tahmin sorgulama Örneğin 48. gün satış?

sorgu = np.array([48]).reshape(-1,1)
tahmin = linear.predict(sorgu)
tahmin
```

Out[87]:
```
array([[50364.0556132]])
```

In [ ]:
```

```