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

```python
In [2]:   revenue_dilan = pd.read_csv('/home/dataguy/dilan/purchase.csv', delimiter = ';', nam
```
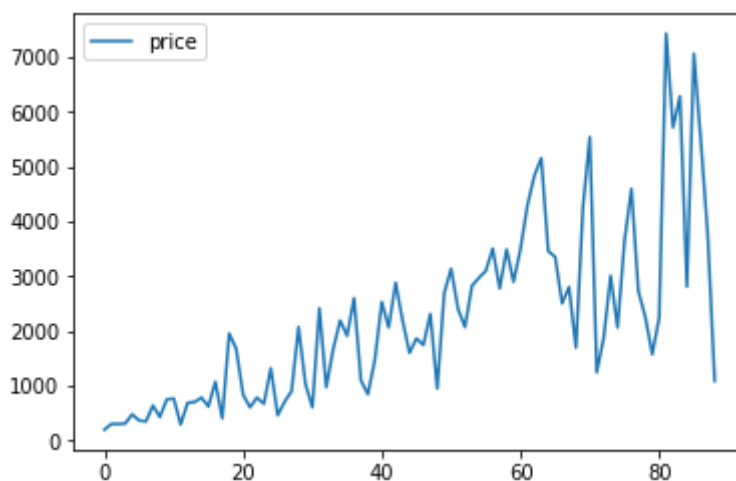
```python
In [3]:   revenue_dilan['Dates'] = pd.to_datetime(revenue_dilan['timestamp']).dt.date
```

```python
In [4]:   revenue = revenue_dilan.groupby('Dates', as_index=False)['price'].sum()
```

```python
In [ ]:
```

```python
In [5]:   revenue.plot()
```
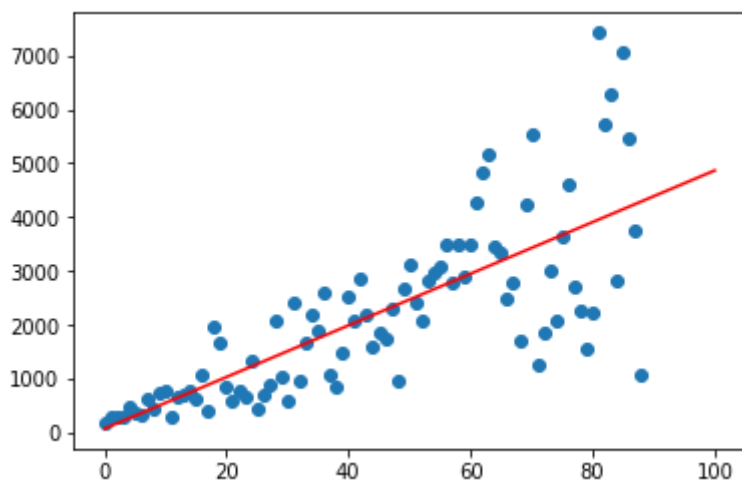
Out[5]:   <matplotlib.axes._subplots.AxesSubplot at 0x7f45f4f0bd30>


```python
In [6]:   revenue_predict = pd.DataFrame(data=revenue)
```

```python
In [7]:   x = revenue.index
          y = revenue.price
```

```python
In [8]:   coefs = np.polyfit(x, y, 1)
```

```python
In [9]:   predict = np.poly1d(coefs)
```

```python
In [10]:  x_test = np.linspace(0, 100)
          y_pred = predict(x_test[:, None])
          plt.scatter(x, y)
          plt.plot(x_test, y_pred, c = 'r')
          plt.show()
```

In [11]:
```python
coefs
```

Out[11]: `array([47.88818522, 78.08838951])`

In [12]:
```python
predict(150)
```

Out[12]: `7261.316172965613`

In [13]:
```python
from sklearn.metrics import r2_score
```

In [14]:
```python
r2_score(y, predict(x))
```
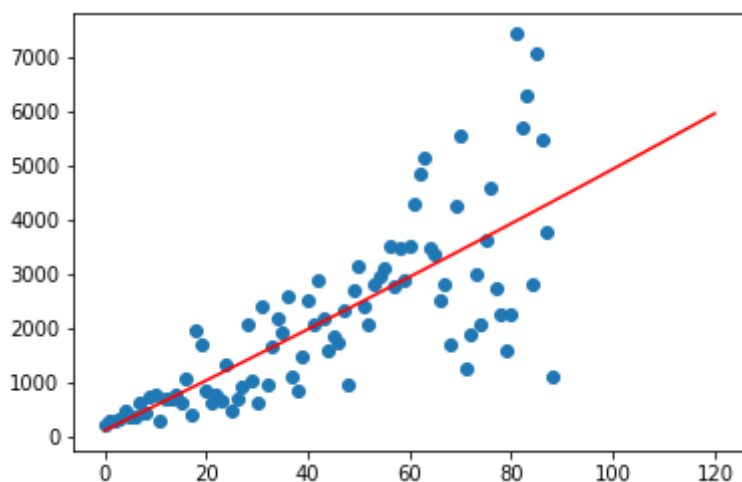
Out[14]: `0.5783472575365922`

In [15]:
```python
coefs = np.polyfit(x, y, 2)
predict = np.poly1d(coefs)
```

In [16]:
```python
x_test = np.linspace(0, 120)
y_pred = predict(x_test[:, None])
plt.scatter(x, y)
plt.plot(x_test, y_pred, c = 'r')
plt.show()
```

In [17]:
```python
coefs
```

Out[17]: `array([2.52783507e-02, 4.56636904e+01, 1.10343565e+02])`

In [18]:
```python
predict(120)
```

Out[18]: `5953.994658628212`

In [19]:
```python
predict(150)
```

Out[19]: `7528.660010324171`