Get Data

```python
In [49]:   import yfinance as yf
           import numpy as np
           import matplotlib.pyplot as plt
```

```python
In [10]:   #tickers = ["AAPL", "GOOG", "BND", "BAC", "NVDA", "BP"]
           tickers = ["AAPL", "BND"]
```

```python
In [16]:   def get_df_stocks(tickers):
               data = yf.download(" ".join(tickers), start="2007-05-01")
               return(data["Adj Close"])
```

```python
In [17]:   data = get_df_stocks(tickers)
```

```
[*********************100%***********************]  2 of 2 completed
```

Plot data

```python
In [53]:   weights = [.70, .30]
```

```python
In [54]:   pctChangedf = data.pct_change().fillna(0).copy()
```

```python
In [55]:   # Weighted returns
           pctChangedf["Strategy"] = (pctChangedf * weights).sum(axis =1)
```

```python
In [56]:   # Volatility
           pctChangedf.std(axis = 0)[2]
```

```
Out[56]:   0.014104197082085506
```

```python
In [57]:   # Get total profits
           np.cumprod(pctChangedf+1).iloc[-1,2]
```

```
Out[57]:   23.633371594938662
```

```python
In [59]:   plt.plot(np.cumprod(pctChangedf+1))
           plt.legend(pctChangedf.columns)
           plt.show()
```
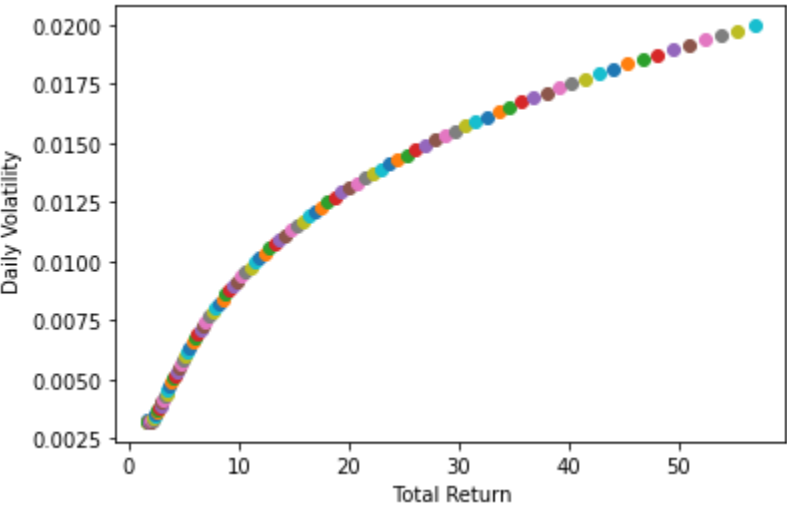

Build the portfolios returns and vol

```python
In [45]:   def get_return_vol(pctChangedf):
               ret = np.cumprod(pctChangedf+1).iloc[-1,2]
               vol = pctChangedf.std(axis = 0)[2]
               return(ret, vol)
```

```python
In [52]:   for w1 in range(0,100):
               weights = [w1/100, 1-w1/100]
               pctChangedf = data.pct_change().fillna(0).copy()
               pctChangedf["Strategy"] = (pctChangedf * weights).sum(axis =1)
               ret, vol = get_return_vol(pctChangedf)
               plt.scatter(ret, vol)
           plt.xlabel("Total Return")
           plt.ylabel("Daily Volatility")
           plt.show()
```

```
Out[52]:   Text(0, 0.5, ' Daily Volatility')
```



```python
In [ ]:
```