```
 1      ==> In ARIMA Model you can forecast a time series using the past values.
 2
 3
 4  **Introduction to Time Series Forecasting**
 5
 6      A time series is a sequence where a metric is recorded over a specific time interval
 7      Depending on the frequency a time series can be yearly (annual budget), quarterly (quaterly company results)
    monthly(air traffic) weekly (sales) daily (weather) hourly(stock price) minutes (inbound calls in call center) and
    seconds (website traffic)
 8
 9
10      Type of Forecasting:
11      1) Univariate Time Series Forecasting
12      2) MutiVariate Time Series Forecasting
13
14
15
```

ARIMA Model Auto Regressive Integerated Moving Average, It is a class of model that explains a given time series based on its past values.

```
ARIMA Model is characterized by 3 terms

p is the order of AR term
q is the order of the MA term
d is the difference

If Time Series has sesional pattern then you need to use the following model SARIMA (where S is for Sesonality)
```

```
1  12:30 => 300
2  12:31 => 302
3  12:32 => 301
4  12:34 => 304
5  12:35 => 306
```

In [3]:

```python
import pandas as pd
df = pd.read_csv('https://raw.githubusercontent.com/selva86/datasets/master/wwwusage.csv',names=['value'],header=0)
```

In [4]:

```python
df
```

Out[4]:

	value
0	88
1	84
2	85
3	85
4	84
...	...
95	222
96	228
97	226
98	222
99	220

100 rows × 1 columns

In [9]:

```python
from statsmodels.tsa.stattools import adfuller
from numpy import log
df_new = df['value'].dropna()
result = adfuller(df_new)
```

In [10]:

```python
print(result)
```

```
(-2.4642397172033665, 0.1244193544710952, 3, 96, {'1%': -3.5003788874873405, '5%': -2.8921519665075235, '10%': -
2.5830997960069446}, 444.67104090432554)
```

In [11]:

```
1  result[1]
```

Out[11]:

0.1244193544710952

In [ ]:

```
1
```