



## How many types of Web Services are there ?

We have two types of services. They are,

1. SOAP based Web Services
2. RESTful Web Services

### SOAP :

- SOAP stands for **Simple Object Access Protocol**
- SOAP is always used XML based data
- Biggest problem of XML is Heavy Weight

#### Syntax:

```
<root>
  <child1>Data</child1>
  <child2>More Data</child2>
</root>
```

- Heavy Band width needed

#### For example:

If any data is transferred from provider application to consumer application , then Heavy Band width data is required.

- Parsing the XML data is take more time. so it is not efficiency.  
Note : Parsing means reading the data from XML object types to Another object types.
- Low performance
- Implementing the SOAP based Web API's are more complexing
- Development time and Cost of the Project is increasing

So because of these common problems , the people are not using the SOAP based Web Services.

### Advantages :

- SOAP supports multiple types of protocols. For example , HTTP , SMTP, FTP etc
- WSDL (Web Service Description Language) uses  
If we want to send the data from one application to another application , we need one special language called as WSDL .
- Due to this WSDL , data has more secured when transferring between two applications over the networks.
- No limit on size of the data.

### RESTful Web Services :

- REST stands for Representational State Transfer , where each URL is Representation of an object.
- By using HTTP verbs or protocols, we can perform operations related to that object.  
For example, **GET , POST , PUT , DELETE**

### Advantages :

- RESTful Web Services are using "JSON" type based data.
- JSON is a "Light weight" component .
- So when transferring of json data over networks is required "less Band width".
- No WSDL language required means we can expose directly our json data over networks by using URLs.
- High performance

- Easy development
- Human understandable message format like plain Text (looks like Python Dictionary)

**Drawbacks :**

- Less secured to data
- It supports only HTTP protocol, no SMTP , no FTP
- Limited amount of data is transferring.