----- **SOAP :** Simple Object Access Protocol

SOAP is an application communication protocol. SOAP is platform independent. SOAP is based on XML. SOAP is a protocol for sending and receiving messages between applications without confronting interoperability issues (interoperability meaning the platform that a Web service is running on becomes irrelevant).

----- **WEB SERVICE :**

A Web service basically is a collection of open protocols that is used to exchange data between applications. Because different applications are written in different programming languages, they often cannot communicate with each other. A Web service enables this communication by using a combination of open protocols and standards, chiefly XML, SOAP and WSDL. A Web service uses XML to tag data, SOAP to transfer a message and finally WSDL to describe the availability of services.

----- **WSDL :** Web Services Description Language

WSDL is used to describe web services. WSDL is written in XML. To see the WSDL you add ?wsdl to the web service endpoint URL. It specifies the location of the service, and the methods of the service, using these major elements:

|  |  |
| --- | --- |
| *Element* | *Description* |
| <types> | Defines the (XML Schema) data types used by the web service |
| <message> | Defines the data elements for each operation |
| <portType> | Describes the operations that can be performed and the messages involved. |
| <binding> | Defines the protocol and data format for each port type |

----- **XML :** Extensible Markup Language

XML was designed to carry data - with focus on what data is. HTML was designed to display data - with focus on how data looks. Many computer systems contain data in incompatible formats. Exchanging data between incompatible systems (or upgraded systems) is a time-consuming task for web developers. Large amounts of data must be converted, and incompatible data is often lost. XML stores data in plain text format. This provides a software- and hardware-independent way of storing, transporting, and sharing data. XML also makes it easier to expand or upgrade to new operating systems, new applications, or new browsers, without losing data. With XML, data can be available to all kinds of "reading machines" like people, computers, voice machines, news feeds, etc.

**----- UDDI :** Universal Description Discovery and Integration

**UDDI** is a [platform-independent](https://en.wikipedia.org/wiki/Platform-independent), [Extensible Markup Language](https://en.wikipedia.org/wiki/Extensible_Markup_Language) protocol that includes a (XML-based) registry by which businesses worldwide can list themselves on the [Internet](https://en.wikipedia.org/wiki/Internet), and a mechanism to register and locate [web service](https://en.wikipedia.org/wiki/Web_service) applications. UDDI was originally proposed as a core [Web service](https://en.wikipedia.org/wiki/Web_service) standard. It is designed to be interrogated by [SOAP](https://en.wikipedia.org/wiki/SOAP_(protocol)) messages and to provide access to [Web Services Description Language](https://en.wikipedia.org/wiki/Web_Services_Description_Language) (WSDL) documents describing the protocol bindings and message formats required to interact with the web services listed in its directory.

**----- ENDPOINT URL :**

The endpoint is the URL where your service can be accessed by a client application. The same web service can have multiple endpoints, for example in order to make it available using different protocols.A web service endpoint is the URL that another **program** would use to communicate with your program.