

Difference between RPC and Document web services

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There are many differences between RPC and Document web services. The important differences between RPC and Document are given below:

RPC Style

- 1) RPC style web services use method name and parameters to generate XML structure.
- 2) The generated WSDL is difficult to be validated against schema.
- 3) In RPC style, SOAP message is sent as many elements.
- 4) RPC style message is tightly coupled.
- 5) In RPC style, SOAP message keeps the operation name.
- 6) In RPC style, parameters are sent as discrete values.

Let's see the RPC style generated WSDL file.

WSDL file:

In WSDL file, it doesn't specify the types details.

```
<types/>
```

For message part, it defines name and type attributes.

```
<message name="getHelloWorldAsString">
```

```
<part name="arg0" type="xsd:string"/>
```

```
</message>
```

```
<message name="getHelloWorldAsStringResponse">
```

```
<part name="return" type="xsd:string"/>
```

```
</message>
```

For soap:body, it defines use and namespace attributes.

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```
<binding name="HelloWorldImplPortBinding" type="tns:HelloWorld">  
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="rpc"/>  
<operation name="getHelloWorldAsString">  
<soap:operation soapAction=""/>  
<input>  
<soap:body use="literal" namespace="http://javatpoint.com"/>  
</input>  
<output>  
<soap:body use="literal" namespace="http://javatpoint.com"/>  
</output>  
</operation>  
</binding>
```

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Document Style

- 1) Document style web services can be validated against predefined schema.
- 2) In document style, SOAP message is sent as a single document.
- 3) Document style message is loosely coupled.
- 4) In Document style, SOAP message loses the operation name.
- 5) In Document style, parameters are sent in XML format.

Let's see the Document style generated WSDL file.

WSDL file:

In WSDL file, it specifies types details having namespace and schemaLocation.

```
<types>
<xsd:schema>
<xsd:import namespace="http://javatpoint.com/"
schemaLocation="http://localhost:7779/ws/hello?xsd=1"/>
</xsd:schema>
</types>
```

For message part, it defines name and element attributes.

```
<message name="getHelloWorldAsString">
<part name="parameters" element="tns:getHelloWorldAsString"/>
</message>
<message name="getHelloWorldAsStringResponse">
<part name="parameters" element="tns:getHelloWorldAsStringResponse"/>
</message>
```

For soap:body, it defines use attribute only not namespace.

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```
<binding name="HelloWorldImplPortBinding" type="tns:HelloWorld">  
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>  
<operation name="getHelloWorldAsString">  
<soap:operation soapAction=""/>  
<input>  
<soap:body use="literal"/>  
</input>  
<output>  
<soap:body use="literal"/>  
</output>  
</operation>  
</binding>
```

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