

Spring RESTful Web Services

Lesson 01

IGATE

Speed.Agility.Imagination

Agenda

- What is RESTful Web Services?
- RESTful Web Service basics
- Characteristics of REST

What is Web Services?

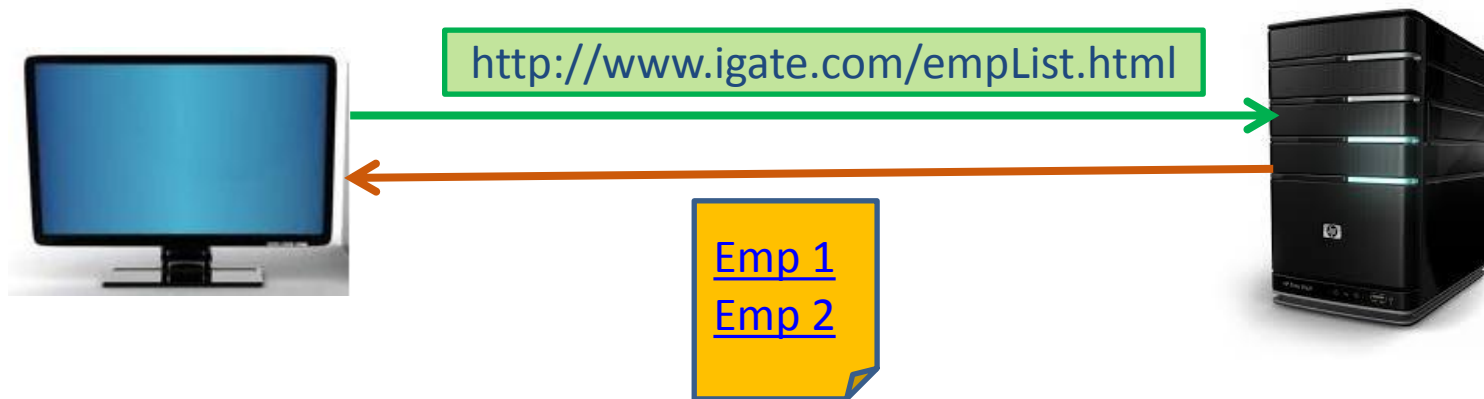
A **Web Service** is a software application **identified by a URI**, whose interfaces and binding are capable of being defined, **described and discovered by XML** artifacts and supports direct interactions with other software applications using XML based messages via **Internet-based protocols**.

REST - REpresentational State Transfer.

- REST is an architectural style.
- REST approach is one of the major resource-oriented approach to building distributed systems
- REST describes any simple interface that transmits data over a HTTP without an additional messaging layer, such as SOAP.
- REST provides a set of design rules for creating stateless services that are viewed as resources, or sources of specific information, and can be identified by their unique URIs.
- A client accesses the resource using the URI, a standardized fixed set of methods, and a representation of the resource is returned.
- The client is said to transfer state with each new resource representation.

Why is it called REST ?

- The Client references a Web resource using a URL
- A representation of the resource is returned
- The representation places the client application in a state.
- The result of the client traversing a hyperlink in is another resource is accessed.
- The new representation places the client application into yet another state.
- Thus, the client application changes (transfers) state with each resource representation => Representation State Transfer



RESTful Web Service Design Principles

➤ Four basic design principles:

- Use HTTP methods explicitly.
- Be stateless.
- Expose directory structure-like URIs.
- Transfer XML, JavaScript Object Notation (JSON), or both.

Summary

➤ In this lesson We have so far seen

- What is RESTful Web Services?
- RESTful Web Service basics
- Characteristics of REST