JAX-WS : wsgen tool example

By mkyong (http://www.mkyong.com/author/mkyong/) | December 31, 2010 | Updated : August 29, 2012 | Viewed : 204,148 times +457 pv/w

The `wsgen` tool is used to parse an existing web service implementation class and generates required files (JAX-WS portable artifacts) for web service deployment. This `wsgen` tool is available in `$JDK/bin` folder.

Use cases

2 common use cases for wsgen tool :

1. Generates JAX-WS portable artifacts (Java files) for web service deployment.
2. Generates WSDL and xsd files, for testing or web service client development.

Let's see a web service implementation class, quite simple, just a method to return a string.

File : ServerInfo.java

```java
package com.mkyong.ws;

import javax.jws.WebMethod;
import javax.jws.WebService;

@WebService
public class ServerInfo{

    @WebMethod
    public String getIpAddress() {

        return "10.10.10.10";

    }

}
```

1. Generates JAX-WS portable artifacts (Java files)

To generate all the JAX-WS portable artifacts for above web service implementation class (`ServerInfo.java`), use following command :

Command : wsgen usage

```
D:\>wsgen -verbose -keep -cp . com.mkyong.ws.ServerInfo

Note:   ap round: 1
[ProcessedMethods Class: com.mkyong.ws.ServerInfo]
[should process method: getIpAddress hasWebMethods: true ]
[endpointReferencesInterface: false]
[declaring class has WebSevice: true]
[returning: true]
[WrapperGen - method: getIpAddress()]
[method.getDeclaringType(): com.mkyong.ws.ServerInfo]
[requestWrapper: com.mkyong.ws.jaxws.GetIpAddress]
[ProcessedMethods Class: java.lang.Object]
com\mkyong\ws\jaxws\GetIpAddress.java
com\mkyong\ws\jaxws\GetIpAddressResponse.java
Note:   ap round: 2
```

In this case, it generated four files :

1. com\mkyong\ws\jaxws\GetIpAddress.java
2. com\mkyong\ws\jaxws\GetIpAddress.class
3. com\mkyong\ws\jaxws\GetIpAddressResponse.java
4. com\mkyong\ws\jaxws\GetIpAddressResponse.class

File : GetIpAddress.java

```java
package com.mkyong.ws.jaxws;

import javax.xml.bind.annotation.XmlAccessType;
import javax.xml.bind.annotation.XmlAccessorType;
import javax.xml.bind.annotation.XmlRootElement;
import javax.xml.bind.annotation.XmlType;

@XmlRootElement(name = "getIpAddress", namespace = "http://ws.mkyong.com/")
@XmlAccessorType(XmlAccessType.FIELD)
@XmlType(name = "getIpAddress", namespace = "http://ws.mkyong.com/")
public class GetIpAddress {

}
```

File : GetIpAddressResponse.java

```java
package com.mkyong.ws.jaxws;

import javax.xml.bind.annotation.XmlAccessType;
import javax.xml.bind.annotation.XmlAccessorType;
import javax.xml.bind.annotation.XmlElement;
import javax.xml.bind.annotation.XmlRootElement;
import javax.xml.bind.annotation.XmlType;

@XmlRootElement(name = "getIpAddressResponse", namespace = "http://ws.mkyong.com/")
@XmlAccessorType(XmlAccessType.FIELD)
@XmlType(name = "getIpAddressResponse", namespace = "http://ws.mkyong.com/")
public class GetIpAddressResponse {

    @XmlElement(name = "return", namespace = "")
    private String _return;

    /**
     *
     * @return
     *     returns String
     */
    public String getReturn() {
        return this._return;
    }

    /**
     *
     * @param _return
     *     the value for the _return property
     */
    public void setReturn(String _return) {
        this._return = _return;
    }

}
```

2. Genarates WSDL and xsd

To generate WSDL and xsd files for above web service implementation class (`ServerInfo.java`),
add an extra **-wsdl** in the `wsgen` command :

Command : wsgen usage

```
D:\>wsgen -verbose -keep -cp . com.mkyong.ws.ServerInfo -wsdl

Note:   ap round: 1
[ProcessedMethods Class: com.mkyong.ws.ServerInfo]
[should process method: getIpAddress hasWebMethods: true ]
[endpointReferencesInterface: false]
[declaring class has WebSevice: true]
[returning: true]
[WrapperGen - method: getIpAddress()]
[method.getDeclaringType(): com.mkyong.ws.ServerInfo]
[requestWrapper: com.mkyong.ws.jaxws.GetIpAddress]
[ProcessedMethods Class: java.lang.Object]
com\mkyong\ws\jaxws\GetIpAddress.java
com\mkyong\ws\jaxws\GetIpAddressResponse.java
Note:   ap round: 2
```

In this case, it generated six files :

1. com\mkyong\ws\jaxws\GetIpAddress.java
2. com\mkyong\ws\jaxws\GetIpAddress.class
3. com\mkyong\ws\jaxws\GetIpAddressResponse.java
4. com\mkyong\ws\jaxws\GetIpAddressResponse.class
5. ServerInfoService_schema1.xsd
6. ServerInfoService.wsdl

File : ServerInfoService_schema1.xsd

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<xs:schema version="1.0"
targetNamespace="http://ws.mkyong.com/"
xmlns:tns="http://ws.mkyong.com/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">

  <xs:element name="getIpAddress" type="tns:getIpAddress"/>

  <xs:element name="getIpAddressResponse" type="tns:getIpAddressResponse"/>

  <xs:complexType name="getIpAddress">
    <xs:sequence/>
  </xs:complexType>

  <xs:complexType name="getIpAddressResponse">
    <xs:sequence>
      <xs:element name="return" type="xs:string" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

File : ServerInfoService.wsdl

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<definitions targetNamespace="http://ws.mkyong.com/"
name="ServerInfoService" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:tns="http://ws.mkyong.com/" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://ws.mkyong.com/"
            schemaLocation="ServerInfoService_schema1.xsd"/>
    </xsd:schema>
  </types>
  <message name="getIpAddress">
    <part name="parameters" element="tns:getIpAddress"/>
  </message>
  <message name="getIpAddressResponse">
    <part name="parameters" element="tns:getIpAddressResponse"/>
  </message>
  <portType name="ServerInfo">
    <operation name="getIpAddress">
      <input message="tns:getIpAddress"/>
      <output message="tns:getIpAddressResponse"/>
    </operation>
  </portType>
  <binding name="ServerInfoPortBinding" type="tns:ServerInfo">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
    <operation name="getIpAddress">
      <soap:operation soapAction=""/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
  <service name="ServerInfoService">
    <port name="ServerInfoPort" binding="tns:ServerInfoPortBinding">
      <soap:address location="REPLACE_WITH_ACTUAL_URL"/>
    </port>
  </service>
</definitions>
```

Published It!

All files are ready, publish it via endpoint publisher.

```
package com.mkyong.endpoint;

import javax.xml.ws.Endpoint;
import com.mkyong.ws.ServerInfo;

//Endpoint publisher
public class WsPublisher{

    public static void main(String[] args) {
        Endpoint.publish("http://localhost:8888/ws/server", new ServerInfo());

        System.out.println("Service is published!");
    }

}
```

Download Source Code

Download It – JAX-WS-wsgen-command-example.zip
(http://www.mkyong.com/wp-content/uploads/2010/12/JAX-WS-wsgen-
command-example.zip) (5KB)

Reference

1. Official site : wsgen JavaDoc (http://jax-ws.java.net/nonav/2.1.2/docs/wsgen.html)

Tags :   jax-ws (http://www.mkyong.com/tag/jax-ws/)   soap (http://www.mkyong.com/tag/soap/)
web services (http://www.mkyong.com/tag/web-services/)
wsgen (http://www.mkyong.com/tag/wsgen/)

Share this article on

 Twitter (https://twitter.com/intent/tweet?text=JAX-WS : wsgen tool
example&url=http://www.mkyong.com/webservices/jax-ws/jax-ws-wsgen-tool-example
/&via=mkyong)   Facebook (https://www.facebook.com/sharer/sharer.php?u=http:
//www.mkyong.com/webservices/jax-ws/jax-ws-wsgen-tool-example/)   Google+
(https://plus.google.com/share?url=http://www.mkyong.com/webservices/jax-ws/jax-ws-wsgen-
tool-example/)

About the Author

mkyong

Founder of Mkyong.com (http://mkyong.com), love Java and open source stuff.
Follow him on Twitter (https://twitter.com/mkyong), or befriend him on Facebook
(http://www.facebook.com/java.tutorial) or Google Plus (https://plus.google.com
/110948163568945735692?rel=author). If you like my tutorials, consider make a donation to
these charities (http://www.mkyong.com/blog/donate-to-charity/).

Related Posts

54k   JAX-WS : SOAP handler testing for client and server side (/webservices/jax-ws/jax-ws-soap-handler-
        testing-for-client-and-server-side/?utm_source=mkyong&utm_medium=author&utm_campaign=related-
        post&utm_content=0)

275k   JAX-WS : SOAP handler in client side (/webservices/jax-ws/jax-ws-soap-handler-in-client-
        side/?utm_source=mkyong&utm_medium=author&utm_campaign=related-post&utm_content=1)

230k   JAX-WS : SOAP handler in server side (/webservices/jax-ws/jax-ws-soap-handler-in-server-
        side/?utm_source=mkyong&utm_medium=author&utm_campaign=related-post&utm_content=2)

40k   javax.xml.stream.XMLStreamException : ParseError at [row,col]:[x,xx] (/webservices/jax-ws/javax-
        xml-stream-xmlstreamexception-parseerror-at-rowcolxxx/?utm_source=mkyong&utm_medium=author&
        utm_campaign=related-post&utm_content=3)

515k   JAX-WS : wsimport tool example (/webservices/jax-ws/jax-ws-wsimport-tool-example
        /?utm_source=mkyong&utm_medium=author&utm_campaign=related-post&utm_content=4)

50k   Container Authentication with JAX-WS - (Tomcat version) (/webservices/jax-ws/container-
        authentication-with-jax-ws-tomcat/?utm_source=mkyong&utm_medium=author&
        utm_campaign=related-post&utm_content=5)

416k   JAX-WS Hello World Example - Document Style (/webservices/jax-ws/jax-ws-hello-world-example-
        document-style/?utm_source=mkyong&utm_medium=author&utm_campaign=related-
        post&utm_content=6)

41k   Wrapper class package.jaxws.methodName is not found. Have you run APT to generate them?
        (/webservices/jax-ws/wrapper-class-package-jaxws-methodname-is-not-found-have-you-run-apt-
        to-generate-them/?utm_source=mkyong&utm_medium=author&utm_campaign=related-
        post&utm_content=7)

144k   How to trace SOAP message in Eclipse IDE (/webservices/jax-ws/how-to-trace-soap-message-
        in-eclipse-ide/?utm_source=mkyong&utm_medium=author&utm_campaign=related-
        post&utm_content=8)

1.1m   JAX-WS Tutorial (/tutorials/jax-ws-tutorials/?utm_source=mkyong&utm_medium=author&
utm_campaign=related-post&utm_content=9)

Popular Posts

738k
Maven + Spring + Hibernate + MySql Example (/spring/maven-spring-hibernate-mysql-example
/?utm_source=mkyong&utm_medium=author&utm_campaign=top-pv&utm_content=1)

1.2m
JAXB hello world example (/java/jaxb-hello-world-example/?utm_source=mkyong&utm_medium=author&
utm_campaign=top-pv&utm_content=2)

1.1m
JAX-WS Tutorial (/tutorials/jax-ws-tutorials/?utm_source=mkyong&utm_medium=author&utm_campaign=top-
pv&utm_content=3)

756k
RESTful Java client with java.net.URL (/webservices/jax-rs/restfull-java-client-with-java-net-url/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=4)

543k
How to access JSON object in JavaScript (/javascript/how-to-access-json-object-in-javascript/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=5)

536k
10 Java Regular Expression Examples You Should Know (/regular-expressions/10-java-regular-expression-examples-
you-should-know/?utm_source=mkyong&utm_medium=author&utm_campaign=top-pv&utm_content=6)

1.6m
How to send HTTP request GET/POST in Java (/java/how-to-send-http-request-getpost-in-java/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=7)

1.8m
Java Properties file examples (/java/java-properties-file-examples/?utm_source=mkyong&utm_medium=author&
utm_campaign=top-pv&utm_content=8)

2m
Spring MVC Tutorial (/tutorials/spring-mvc-tutorials/?utm_source=mkyong&utm_medium=author&utm_campaign=top-
pv&utm_content=9)

523k
How to include custom library into maven local repository? (/maven/how-to-include-library-manully-into-maven-local-
repository/?utm_source=mkyong&utm_medium=author&utm_campaign=top-pv&utm_content=10)

515k
JAX-WS : wsimport tool example (/webservices/jax-ws/jax-ws-wsimport-tool-example/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=11)

548k
ClassNotFoundException : org.springframework.web.context.ContextLoaderListener (/spring/spring-error-
classnotfoundexception-org-springframework-web-context-contextloaderlistener/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=12)

767k
RESTful Java client with Jersey client (/webservices/jax-rs/restful-java-client-with-jersey-client/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=13)

1.4m
JAX-RS Tutorial (/tutorials/jax-rs-tutorials/?utm_source=mkyong&utm_medium=author&utm_campaign=top-
pv&utm_content=14)

1.1m
Android Tutorial (/tutorials/android-tutorial/?utm_source=mkyong&utm_medium=author&utm_campaign=top-
pv&utm_content=15)

720k
Android ImageView example (/android/android-imageview-example/?utm_source=mkyong&utm_medium=author&
utm_campaign=top-pv&utm_content=16)

799k
Android custom dialog example (/android/android-custom-dialog-example/?utm_source=mkyong&
utm_medium=author&utm_campaign=top-pv&utm_content=17)

894k
What is Tomcat default administrator password ? (/tomcat/tomcat-default-administrator-password
/?utm_source=mkyong&utm_medium=author&utm_campaign=top-pv&utm_content=18)

683k
Hibernate - Cascade example (save, update, delete and delete-orphan) (/hibernate/hibernate-cascade-example-
save-update-delete-and-delete-orphan/?utm_source=mkyong&utm_medium=author&utm_campaign=top-
pv&utm_content=19)

621k
Log4j hello world example (/logging/log4j-hello-world-example/?utm_source=mkyong&utm_medium=author&
utm_campaign=top-pv&utm_content=20)

Leave a Reply

Join the discussion

Sort by: newest | oldest | **most voted**

Mike Lama

Guest

Thank you.

👍 0 👎   ↩ REPLY   ⊘ 2 years 4 months ago

Excelanto

Guest

Thanks for your valuable posting.I have collect more than information from your website. It is really wonderful blog. please added more than tips. i'm working in Erp in india (http://www.excelanto.com /).Here providing very low price and Quality ERP,Cloud ERP, CMS , responsive webdesign and ERP. you have any more than information kindly make me call this number 044-42127512 or send your mail info@excelanto.com (mailto:info@excelanto.com).

👍 0 👎   ↩ REPLY   ⊘ 3 years 16 days ago

jk

Guest

How can we have the schema included within the WSDL. I dnt wish to have a seperate schema file.Is there a way to specify that.

👍 0 👎   ↩ REPLY   ⊘ 3 years 2 months ago ⌃

Fazil

Guest

change the SoapBinding style to RPC then all the types will be included in WSDL itself.

👍 0 👎   ↩ REPLY   ⊘ 2 years 6 months ago

arjun cr

Guest

What If I have My Own JaxB Classes,How to create the XSD from those JAXB Classes,using WSGEN,
I know there are couple of tools to generate XSD file from JAXB classes,But I want to create those XSD file from my own already created JaxB classes,during the generation of WSDL using wsgen.
Thanks in Advance

👍 0 👎   ↩ REPLY   ⊘ 4 years 15 hours ago

Lily

Guest

hi, I have a problem when i execute the command wsgen
The path of my java project is "E:\java\Server\src\com\mkyong\ws\ServerInfo.java"
I use the wsgen commands as:
E:\>wsgen -verbose -keep -cp E:\java\Server\src\com.mkyong.ws.ServerInfo
error:
Missing SEI

Could you help me resolve?Thanks

👍 0 👎   ↩ REPLY   ⊘ 4 years 1 month ago ⌃

Salwa

Guest

Follow the tutorial here: http://www.youtube.com/watch?v=od6fNiegu-Q (http://www.youtube.com/watch?v=od6fNiegu-Q)
it will guide you through the eclipse in how to use the wsgen comment to generate the WSDL…

👍 0 👎   ↩ REPLY   ⏱ 4 years 1 month ago

Dilip

Guest

A very good example. I succeded to create and run my first webservice after following this simple and straight forward example(I was struggling to create my helloworld type simple webservice). Thanks mr. MKYong.

👍 0 👎   ↩ REPLY   ⏱ 4 years 5 months ago

Amit Singh Hora

Guest

Hi,

i am using the wsgen command and i am getting the following output on command promp but no source files or classes are getting generated and pointers on this…
C:\Program Files\Java\jdk1.6.0_31\bin>wsgen -verbose -keep -cp . Service.AddSer
viceImpl -d src
Note: ap round: 1
[ProcessedMethods Interface: Service.AddService]
[should process method: addNumber hasWebMethods: false]
[endpointReferencesInterface: true]
[declaring class has WebSevice: true]
[returning: true]
[WrapperGen – method: addNumber(int,int)]
[method.getDeclaringType(): Service.AddService]

👍 0 👎   ↩ REPLY   ⏱ 4 years 7 months ago ⌃

baoyu

Guest

remove the "parameterStyle = ParameterStyle.BARE"

👍 0 👎   ↩ REPLY   ⏱ 4 years 4 months ago

Delicious Bookmarks for March 15th from 17:13 to 21:51 « Lâmôlabs (http://www.lamolabs.org /blog/10180/delicious-bookmarks- for-march-15th-from-1713-to- 2151/)

[…] JAX-WS : wsgen tool example – March 15th (tags: jax-ws java wsgen wsdl example guide tutorial programming webservices) […]

👍 0 👎   ↩ REPLY   ⏱ 4 years 9 months ago

Praveen Das

Guest

Hi MKYong, I'm encountering a wsgen compilation failure for Hibernate Annotations. Scenario – Create JAX-WS webservice for validation of a user. Issue Faced – wsgen command fails with below error error: Could not create declaration for annotation type com. error: Could not create declaration for annotation type com. 2 errors error: compilation failed, errors should have been reported Command- wsgen -s src/main/java -d target/Struts2Example/WEB-INF/classes -cp target/Struts2Example/WEB-INF/classes com.hcl.customer.dao.impl.WSCustomerDAOImpl Code – @WebService(endpointInterface="com.hcl.customer.dao.WSCustomerDAO") public class WSCustomerDAOImpl implements WSCustomerDAO{ Logger logger = Logger.getLogger(WSCustomerDAOImpl.class); @SessionTarget Session session; @TransactionTarget Transaction transaction; // return customer model if the username & password exists public Customer validateUser(String username, String… Read more »

👍 0 👎   ↩ REPLY   ⏱ 4 years 10 months ago

Abilash

Guest

I am getting the below exception while running your file. may I know where is the issue?
_
_
_
0
_
java.lang.ArrayIndexOutOfBoundsException: 0 at

org.apache.axis2.description.AxisService.getWSDL(AxisService.java:1643) at
org.apache.axis2.description.AxisService.printWSDL(AxisService.java:1413) at
org.apache.axis2.transport.http.HTTPWorker.service(HTTPWorker.java:154) at
org.apache.axis2.transport.http.server.AxisHttpService.doService(AxisHttpService.java:281) at
org.apache.axis2.transport.http.server.AxisHttpService.handleRequest(AxisHttpService.java:187) at
org.apache.axis2.transport.http.server.HttpServiceProcessor.run(HttpServiceProcessor.java:82) at
java.util.concurrent.ThreadPoolExecutor$Worker.runTask(Unknown Source) at
java.util.concurrent.ThreadPoolExecutor$Worker.run(Unknown Source) at
java.lang.Thread.run(Unknown Source)

| 👍 | 0 | 👎 | ↩ REPLY | ⊘ 4 years 10 months ago ⌃ |

Abilash

Its in the browser, after publishing the WS.

Guest

| 👍 | 0 | 👎 | ↩ REPLY | ⊘ 4 years 10 months ago |

david

I had modify the generated xsd file said minOccurs change to 1. But how can I publish it on
http://127.0.0.1:9999/ws/hello?wsdl (http://127.0.0.1:9999/ws/hello?wsdl)

Guest

It always publish the default wsdl and xsd back to me. the one I change never display. Where should
I put the wsdl and xsd files under by file system?

| 👍 | 0 | 👎 | ↩ REPLY | ⊘ 4 years 10 months ago |

sebastian

hi, i am having a problem when i execute the command wsgen

Guest

C:\Users\ominatti\Documents\JAVA\JWS\EXAMPLE WSGEN\WebServices>wsgen -verbose -k
eep -cp . com.mkyong.ws.ServerInfo

error
Class not found: "com.mkyong.ws.ServerInfo"

Could you help me please ¿?

Thanks

| 👍 | 0 | 👎 | ↩ REPLY | ⊘ 5 years 14 days ago ⌃ |

Mao

You must have com.mkyong.ws.ServerInfo class file after compilation(javac)

Guest

| 👍 | 0 | 👎 | ↩ REPLY | ⊘ 5 years 23 hours ago |

gyan

Please Anyone Advice me ..

Guest

How to annotate this claas to create web service.

As I found null value in list type field from web service.

@WebMethod(operationName = "getTickets")

public List getTickets(long ticketId) throws TicketingException {
try {
return new TicketBO().getTickets(ticketId);
} catch (TicketingException e) {
logger.error(e);
throw e;
}
}

public class Ticket{

private Long ticketId;
private String callerNumber;
private List dynaFieldValues;

}

```
public class DynaFieldValue implements Serializable,Comparable {

private DynaFieldValueId id;
private String value;

}
```

👍 0 👎   ↩ REPLY   ⊙ 5 years 2 months ago

JAX-WS Hello World Example –
Document Style
(http://www.mkyong.com
/webservices/jax-ws/jax-ws-hello-
world-example-document-style/)

[…] tool is available in the "JDK_Path\bin" folder. For detail, please read this JAX-WS : wsgen tool example […]

👍 0 👎   ↩ REPLY   ⊙ 5 years 3 months ago

Jitendra

Guest

Hi
Thanks for nice tutorial, Is it possible to generate wsdl with inline schema,
is there way we can automate generation of wsdl with inline (instead of having separate schema file)
Many Thanks in advance :)

👍 0 👎   ↩ REPLY   ⊙ 5 years 7 months ago

Levan

Guest

Just a little side-note: before using wsgen tool, web service implementation class must be compiled (using javac).

:-)

👍 0 👎   ↩ REPLY   ⊙ 5 years 10 months ago

JAX-WS Tutorial
(http://www.mkyong.com/tutorials
/jax-ws-tutorials/)

[…] files (JAX-WS portable artifacts) for web service client to access the published web services.JAX-WS : wsgen tool example The wsgen tool is used to parse an existing web service implementation class and generates required […]

👍 0 👎   ↩ REPLY   ⊙ 6 years 5 months ago

Rising Posts (100k-500k pv)

+7.5k   Java 8 Streams filter examples (/java8/java-8-streams-filter-examples/?utm_source=mkyong&
         utm_medium=sidebar&utm_campaign=100k-500k&utm_content=0)

+6k   Spring Boot Tutorials (/tutorials/spring-boot-tutorials/?utm_source=mkyong&utm_medium=sidebar&
         utm_campaign=100k-500k&utm_content=1)

+5.4k   Java 8 Streams map() examples (/java8/java-8-streams-map-examples/?utm_source=mkyong&
         utm_medium=sidebar&utm_campaign=100k-500k&utm_content=2)

+4.5k   Apache POI – Reading and Writing Excel file in Java (/java/apache-poi-reading-and-writing-excel-
         file-in-java/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=100k-500k&utm_content=3)

+4k   Java 8 Tutorials (/tutorials/java-8-tutorials/?utm_source=mkyong&utm_medium=sidebar&
         utm_campaign=100k-500k&utm_content=4)

+3.7k   Java 8 Lambda : Comparator example (/java8/java-8-lambda-comparator-example
         /?utm_source=mkyong&utm_medium=sidebar&utm_campaign=100k-500k&utm_content=5)

+3.6k   How to set java_home on Windows 10? (/java/how-to-set-java_home-on-windows-
         10/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=100k-500k&utm_content=6)

+3.5k   Java enum example (/java/java-enum-example/?utm_source=mkyong&utm_medium=sidebar&
         utm_campaign=100k-500k&utm_content=7)

+3.4k   Java 8 - Convert List to Map (/java8/java-8-convert-list-to-map/?utm_source=mkyong&
         utm_medium=sidebar&utm_campaign=100k-500k&utm_content=8)

+2.9k   Spring Boot @ConfigurationProperties example (/spring-boot/spring-boot-configurationproperties-
         example/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=100k-500k&utm_content=9)

+2.9k   Java 8 - Filter a Map examples (/java8/java-8-filter-a-map-examples/?utm_source=mkyong&
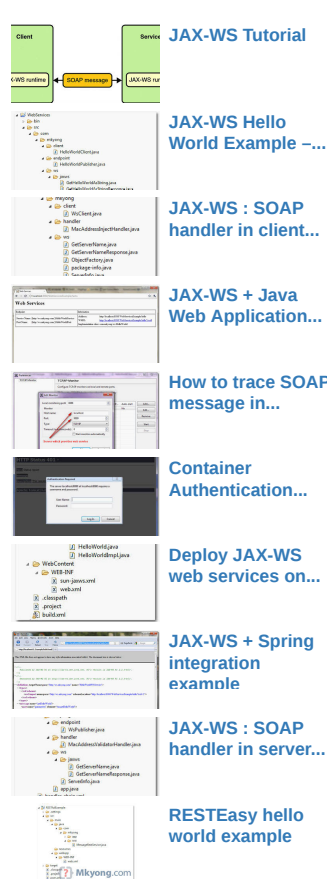   utm_medium=sidebar&utm_campaign=100k-500k&utm_content=10)

Rising Posts (10k-99k pv)

+4k   Python - How to split a String (/python/python-how-to-split-a-string/?utm_source=mkyong&
         utm_medium=sidebar&utm_campaign=10k-100k&utm_content=0)

+2k   Java 8 - How to convert String to LocalDate (/java8/java-8-how-to-convert-string-to-localdate
         /?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=1)

+1.9k   Python - Check if key exists in dictionary (/python/python-check-if-key-exists-in-dictionary
         /?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=2)

+1.8k   Java 8 - How to format LocalDateTime (/java8/java-8-how-to-format-localdatetime
         /?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=3)

+1.8k   Python - How to loop a dictionary (/python/python-how-to-loop-a-dictionary/?utm_source=mkyong&
         utm_medium=sidebar&utm_campaign=10k-100k&utm_content=4)

+1.6k   Java - Check if Array contains a certain value? (/java/java-check-if-array-contains-a-certain-
         value/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=5)

+1.5k   jQuery Ajax submit a multipart form (/jquery/jquery-ajax-submit-a-multipart-
         form/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=6)

+1.5k Java 8 - Convert Map to List (/java8/java-8-convert-map-to-list/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=10k-100k&utm_content=7)

+1.4k Spring Boot + Hibernate Search example (/spring-boot/spring-boot-hibernate-search-example
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=8)

+1.4k Spring Boot non-web application example (/spring-boot/spring-boot-non-web-application-example
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=9)

+1.4k Java - How to convert Array to Stream (/java8/java-how-to-convert-array-to-stream
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=10k-100k&utm_content=10)

Rising Posts (<10k pv)

+720 Oracle PL/SQL - CREATE function example (/oracle/oracle-plsql-create-function-example
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=0-10k&utm_content=0)

+514 Mac OSX - where is default localhost folder? (/mac/mac-osx-where-is-default-localhost-folder
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=0-10k&utm_content=1)

+437 php-cgi.exe - The application was unable to start correctly (/nginx/php-cgi-exe-the-application-
was-unable-to-start-correctly/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=0-10k&
utm_content=2)

+404 Nginx + PHP - No input file specified (/nginx/nginx-php-no-input-file-specified/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=3)

+377 MongoDB - Failed to unlink socket file /tmp/mongodb-27017 (/mongodb/mongodb-failed-to-unlink-
socket-file-tmpmongodb-27017/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=0-10k&
utm_content=4)

+347 MongoDB - bind() failed errno:99 Cannot assign requested address for socket (/mongodb/mongodb-
bind-failed-errno99-cannot-assign-requested-address-for-socket/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=5)

+341 MongoDB - Where is the log file? (/mongodb/mongodb-where-is-the-log-file/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=6)

+336 Gradle - Could not find method compileOnly (/gradle/gradle-could-not-find-method-compileonly
/?utm_source=mkyong&utm_medium=sidebar&utm_campaign=0-10k&utm_content=7)

+329 How to edit hosts file on Mac OSX (/mac/how-to-edit-hosts-file-on-mac-osx/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=8)

+304 Nginx + PHP on Windows (/nginx/nginx-php-on-windows/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=9)

+302 Oracle PL/SQL - CEIL function example (/oracle/oracle-plsql-ceil-function/?utm_source=mkyong&
utm_medium=sidebar&utm_campaign=0-10k&utm_content=10)

JAX-WS Tutorial

JAX-WS Hello
World Example –...

JAX-WS : SOAP
handler in client...

JAX-WS + Java
Web Application...

How to trace SOAP
message in...

Container
Authentication...

Deploy JAX-WS
web services on...

JAX-WS + Spring
integration
example

JAX-WS : SOAP
handler in server...

RESTEasy hello
world example

JAX-RS Tutorial

Sp
Th

Sp
Tut

Favorites Links

Android Getting Started (http://developer.android.com/training/index.html)
Google App Engine – Java (https://cloud.google.com/appengine/docs/java/)
Spring 2.5.x Documentation (http://docs.spring.io/spring/docs/2.5.x/reference/index.html)
Spring 3.2.x Documentation (http://docs.spring.io/spring/docs/3.2.x/spring-framework-reference/html/)
Spring 4.1.x Documentation (http://docs.spring.io/spring/docs/4.1.x/spring-framework-reference/html/)
Java EE 5 Tutorial (http://docs.oracle.com/javaee/5/tutorial/doc/docinfo.html)
Java EE 6 Tutorial (http://docs.oracle.com/javaee/6/tutorial/doc/docinfo.html)
Java EE 7 Tutorial (https://docs.oracle.com/javaee/7/tutorial/index.html)
Java 6 API (http://docs.oracle.com/javase/6/docs/api/overview-summary.html)
Java 7 API (http://docs.oracle.com/javase/7/docs/api/overview-summary.html)
Java 8 API (http://docs.oracle.com/javase/8/docs/api/overview-summary.html)
Oracle J2SE Tutorials (http://docs.oracle.com/javase/tutorial/index.html)
JSF Home Page (https://javaserverfaces.java.net/)
JSP Home Page (https://jsp.java.net/)
Maven Central Repository (http://search.maven.org/)
Gradle User Guide (https://docs.gradle.org/current/userguide/userguide.html)

Hibernate ORM (http://hibernate.org/orm/)
JAX-WS Home Page (https://jax-ws.java.net/)
JAX-RS Home Page (Jersey) (https://jax-ws.java.net/)
Tomcat 8 Documentation (http://tomcat.apache.org/tomcat-8.0-doc/index.html)

Partners

JAX London (https://jaxlondon.com/?utm_source=mkyong.com&utm_medium=referral&
utm_campaign=mediapartner)
Java Code Geeks (http://www.javacodegeeks.com/)

About Mkyong.com

Mkyong.com is for Java and J2EE developers, all examples are simple and easy to understand, and
well tested in my development environment.

Mkyong.com is created, written by, and maintained by Yong Mook Kim, aka Mkyong. It is built on
WordPress (https://wordpress.org/), hosted by Liquid Web (//www.liquidweb.com/?RID=mkyong), and
the caches are served by CloudFlare CDN.