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AN AUTONOMOUS INSTITUTION

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai **DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY**

Unit V- Introduction to AJAX and Webservices

Creating Webservices

Step 1: Click on Eclipse icon. Click on File->New->Dynamic Web Project. Give the suitable name to the project. I have given the project name as **WebService**. Set the Tomcat Web Server and appropriate version number. Following screenshot illustrates this.

New Dynamic Web Project —	×
Dynamic Web Project	R
Create a standalone Dynamic Web project or add it to a new or existing Enterprise Application.	
Project name: WebService Project location Use default location Location: D:\WebService Brows Target runtime Apache Tomcat v7.0 VNew Run Dynamic web module version 2.5	E
Configuration	
<pre></pre> <pre></pre> <pre>/ Modified to the second seco</pre>	y
Hint: Get started quickly by selecting one of the pre-defined project configurations.	
EAR membership Add project to an EAR EAR project name: WebServiceEAR Working sets Working sets: Select	ject
(?) < Back Next > Finish Car	ncel

Step 2 : Locate src folder under the project in WebService project.

Project Explore	r⊠				
> 😸 Servers V 🔡 WebService > 📴 Deploye > 🖉 JAX-WS	e ment S Weł	Descriptor: WebService			
🗸 😕 Java Re		New	>	ĒĴ	Project
(≞ src		Go Into		ø	Annotation
) 🛋 JavaSci		Open Type Hierarchy	F4	G	Class
> 🗁 build		Show In	Alt+Shift+W >	G	Enum
> 🗁 WebCc		Copy Copy Qualified Name	Ctrl+C	6 ⊕	Interface Package
	南	Paste	Ctrl+V	ŝ	Source Folder
	ж	Delete	Delete	2	HTML File
	8	Remove from Context	Ctrl+Alt+Shift+Down		JSP File

Right click on src folder Select New-> Class

A New Class Window opens up. Give suitable Package name, Class name and uncheck the check box for void main function. Then click **Finish** button. It is illustrated by following screenshot

check box for void main function. Then click Finish button. It is illustrated by following screenshot

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/a class.	C
WebService/src	Br <u>o</u> wse
com.mypackage	Bro <u>w</u> se
e:	Browse
MyServer	
public Odefault Oprivate Oprotected abstract I final I static	
java.lang.Object	Brows <u>e</u>
	<u>A</u> dd
	Remove
Ubs would you like to create? public static void main(String[] args) Constructors from superclass Inherited abstract methods	
dd comments? (Configure templates and default value <u>here</u>) <u>G</u> enerate comments	
	ra class. WebService/src com.mypackage e MyServer gublic gublic default private protected abstract final static java.lang.Object public static void main(String[] args) Constructors from superclass Inherited abstract methods dd comments? (Configure templates and default value here) Generate comments

Step 3 : Now write the following code for MyServer.java

```
package com.mypackage;
public class MyServer {
    public int add(int a,int b){
       return a+b;
    }
}
Save the above code.
```

Step 4 : Now right click on src folder. Click New->other->Web Services->Web Service. Then click Next button

New New		
Select a wizard Create a new XML web service.		Ê
<u>W</u> izards:		
type filter text		
 > >> >>		~
(?) < <u>B</u> ack <u>N</u> ext > Eini	sh	Cancel

The **Web Services** window will appear. Write the name of service implementation and click on

Web service runtime: Apache Axis. Following Screenshot shows this-

Service implementation: com.mypackage.MyServer V Bro Start service Configuration: Server runtime: Tomcat v7.0 S Web service runtime: Apache Service project: WebService Client type: Java Proxy		bottom up sava beam	Web Service
Start service Configuration: Server runtime: Tomcat v7.0 S Web service runtime: Apache Service project: WebService Client type: Java Proxy	e implementatio	com.mypackage.My	Server V B <u>r</u> owse
Client type: Java Proxy	Start service	6	Configuration: Server runtime: Tomcat v7.0 Serve
Client type: Java Proxy			Service project: WebService
No slight	type: Java Proxy		
Configuration: No client gene	No client		Configuration: No client generati
Publish the Web service Monitor the Web service	blish the Web servic	e	

Click on $\ensuremath{\textbf{Axis2}}$ and then click $\ensuremath{\textbf{Ok}}$ button. Refer following screenshot

Service Deployment Configuration	×
Service Deployment Configuration	
Choose from the list of runtimes and deployment servers, or use	the default settings.
Server-Side Deployment Selection:	
○ Choose server first	
Choose Web service runtime first	
○ Explore options	
Web service runtime:	
Apache Axis Apache Axis2	
Apache CXF 2.x	
Server runtime:	
✓ ∃ Existing Servers	
Tomcat v7.0 Server at localhost	
> E Server Types	
	\frown
	OK Cancel
	\sim

Then click on Finish button. You will get the progress window as

	-		×
Cancel		Details >	×
	Cancel	Cancel	Cancel Details >

This will generate the WSDL file for your application.

Step 5: To view the generated WSDL file we need to open up the Web Browser in Eclipse. For that



3. Now click on Services. Your Web Service name MyServer can be located on the page.

\$\$ \$\$	http://localhost:8080/WebService/services/listServices ~		
	http://www.apache.org/	.22,	~
Back Home	Refresh	- 1	
Available	services		
MyServer			
Service Descriptio	n : Please Type your service description here		
Service EPR : http:	://localhost:8080/WebService/services/MyServer		
Service Status : Ac	tive		
Available Operat	tions		
• add			,
<		>	

4. Just click on **MyServer** link another web page will be opened up in the browser. This is actually your WSDL file. Copy the full URL for WSDL file marked in screenshot given below. Save this URL in some Notepad file. Note that: We need this URL during the

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		~
xml version="1.0" encoding="UTF-8"?		100
- <wsdl:definitions <="" p="" targetnamespace="http://mypackage.com"></wsdl:definitions>		
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"		
xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"		
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"		
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"		
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"		
xmlns:ns1="http://org.apache.axis2/xsd"		
xmlns:xs="http://www.w3.org/2001/XMLSchema"		
xmlns:ns="http://mypackage.com"		
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">		
<wsdl:documentation> Please Type your service description here</wsdl:documentation>		
- <wsdl:types></wsdl:types>		
- <xs;schema <="" p="" targetnamespace="http://mvpackage.com"></xs;schema>		
elementFormDefault="gualified" attributeFormDefault="gualified">		
<pre>- <xs:element name="add"></xs:element></pre>		
- <xs:complextype></xs:complextype>		
- <x\$`\$poupdcp></x\$`\$poupdcp>		-
<pre><s:element name="a" type="xs:int"></s:element></pre>		
<)	•

Stage II: Creating Client for Web Service

Step 6 : Now go to **File->New->Dynamic Web Project**. Give suitable name for your application. Here we are creating a client for the Web service created in above steps. Hence I have given the name **WebServiceClient**. Then click **Finish** button

Step 7 : Now under WebServiceClient, right click on src folder. Click on New->Other-> Web Services->Web Service Client



Step 8: Now right click on **src** folder of **WebServiceClient**. Click on **New->Class**. The **New Java Class** window will appear. Set appropriate package name, class name and Check for void main method.