

Principles and Techniques of DBMS 11

SSH and .NET

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- SSH
 - Tomcat Configuration
 - Maven Project
 - Examples

- .NET
 - Java EE vs. .NET
 - A Simple ASP.NET Example

Configure Tomcat Server

SSHSample/pom.xml Tomcat

Configuration path: /Servers/Tomcat v7.0 Server at local Browse...

[Open launch configuration](#)

Server Locations

Specify the server path (i.e. catalina.base) and deploy path. Server must be published with no modules present to make changes.

Use workspace metadata (does not modify Tomcat installation)

Use Tomcat installation (takes control of Tomcat installation)

Use custom location (does not modify Tomcat installation)

Server path: E:\apache-tomcat-7.0.50 Browse...

[Set deploy path to the default value](#)

Deploy path: webapps Browse...

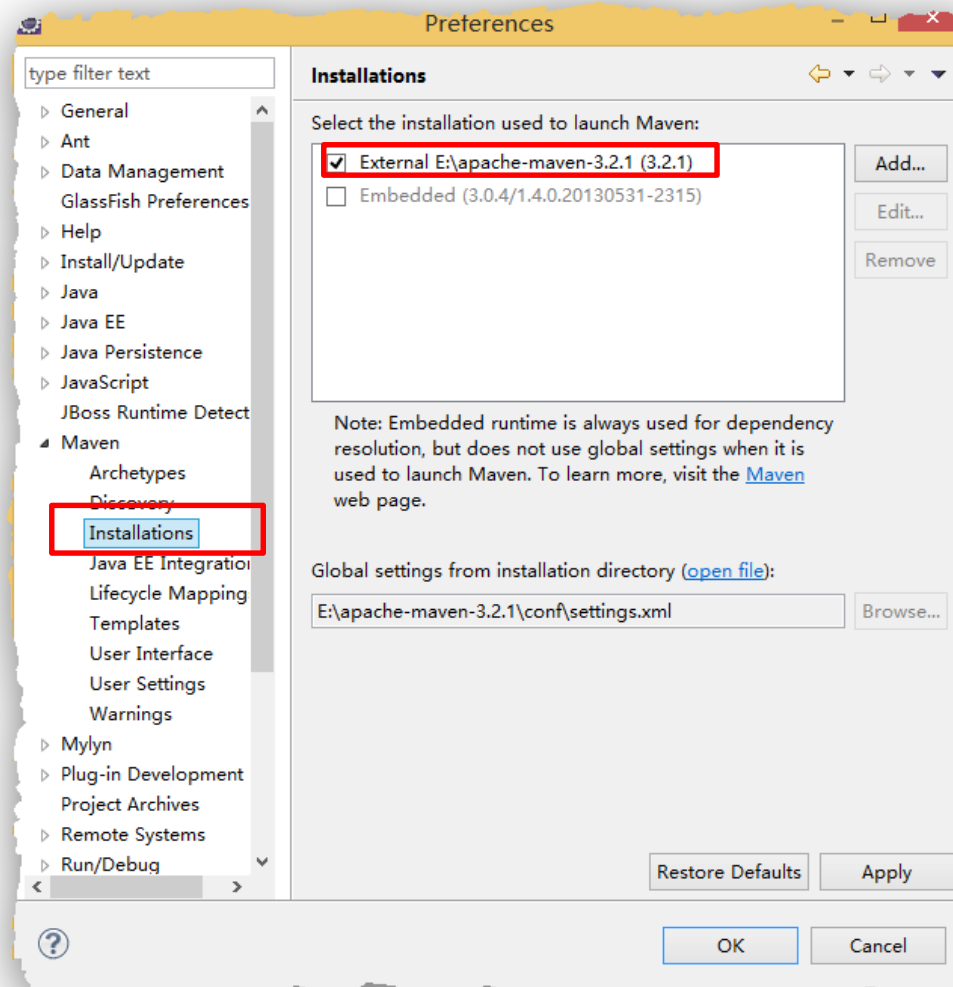
Server Options

Overview Modules

Markers Properties Servers Data Source Explorer Snippets

JBoss EAP 6.1+ Runtime Server [Stopped]

Tomcat [Started, Synchronized]

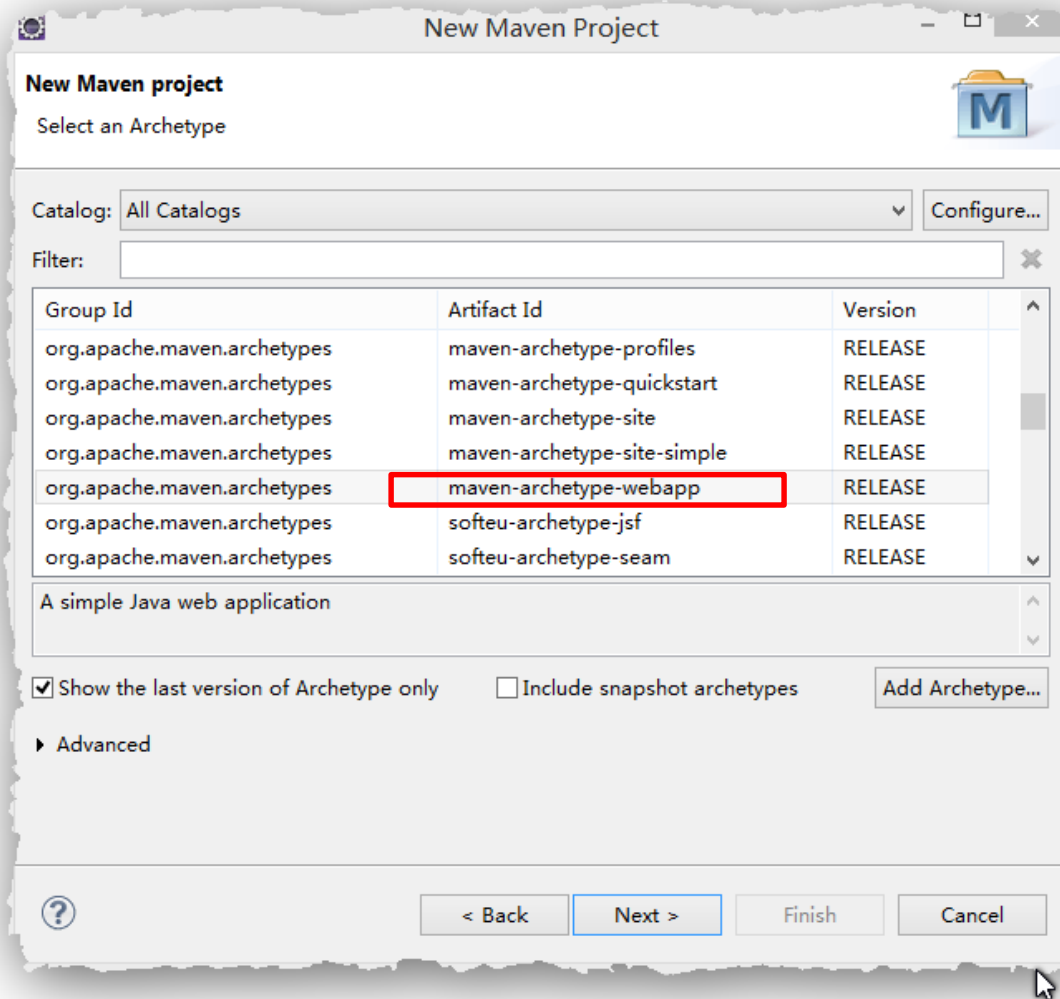


- Edit `MAVEN_HOME\conf\setting.xml`, add:

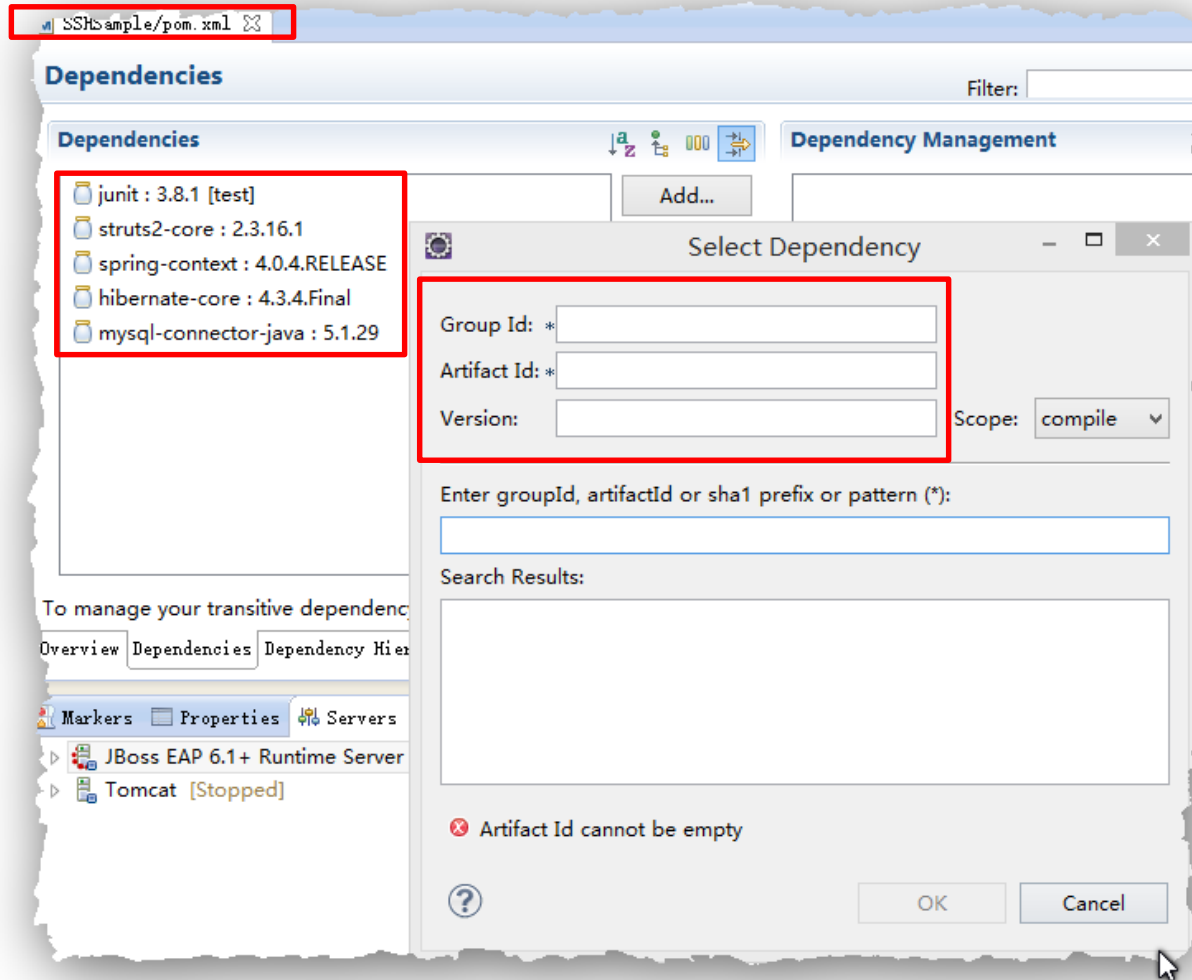
```
<server>
  <id>tomcat</id>
  <username>admin</username>
  <password>tomcat</password>
</server>
```
- Edit `TOMCAT_HOME\conf\tomcat-users.xml`, add:

```
<role rolename="manager-gui"/>
<role rolename="manager-script"/>
<user username="admin"
  password="tomcat"
  roles="manager-gui,manager-script"/>
```

New Maven Project



Add dependencies



The screenshot shows an IDE window titled "SSH: sample/pom.xml". The main view is "Dependencies", which lists the following dependencies:

- junit : 3.8.1 [test]
- struts2-core : 2.3.16.1
- spring-context : 4.0.4.RELEASE
- hibernate-core : 4.3.4.Final
- mysql-connector-java : 5.1.29

The "Add..." button is visible. A "Select Dependency" dialog box is open, with the following fields:

- Group Id: *
- Artifact Id: *
- Version:
- Scope: compile

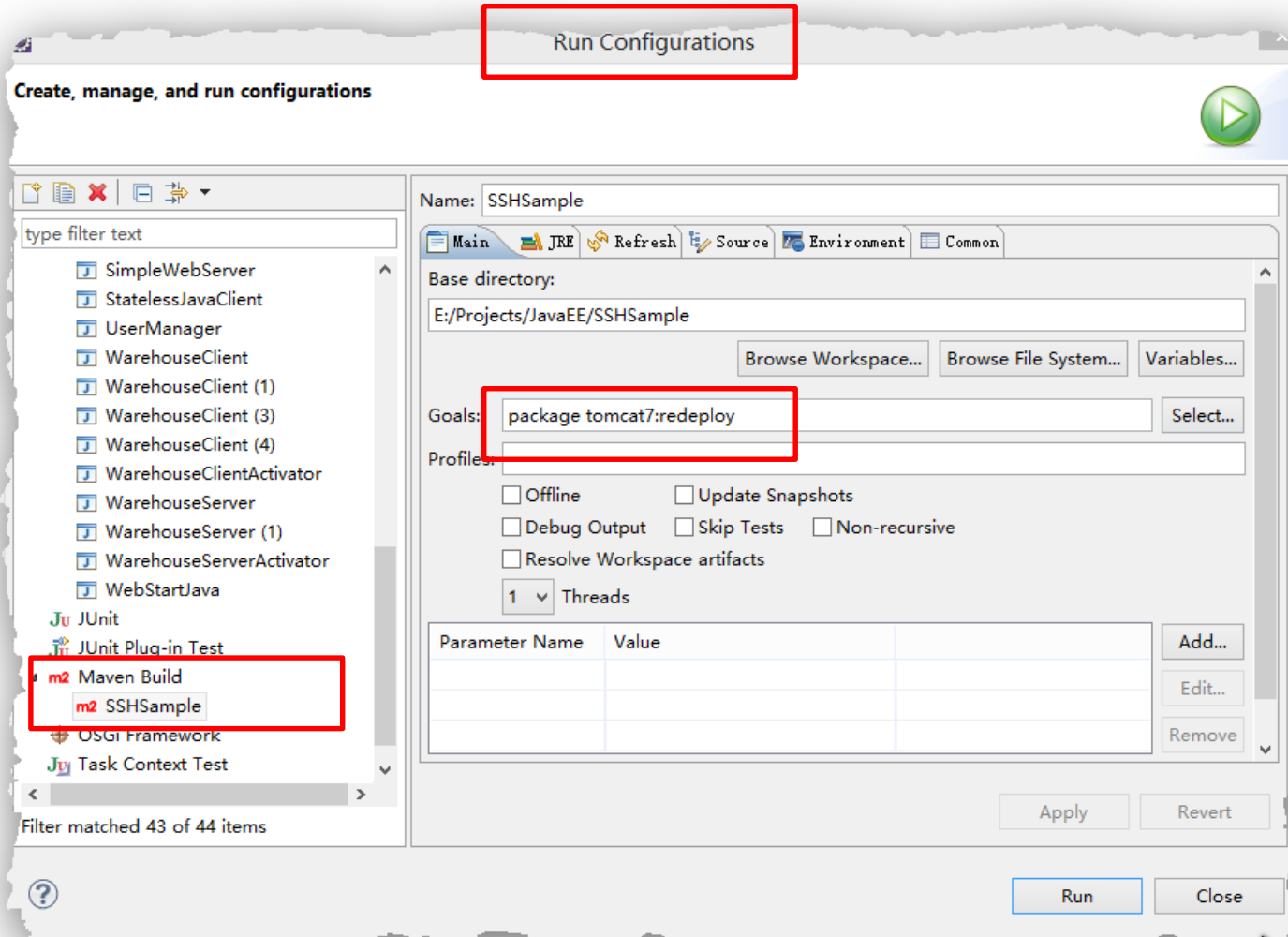
The "Artifact Id" field is empty, and an error message is displayed: "Artifact Id cannot be empty". The dialog box also includes a search input field, a "Search Results" area, and "OK" and "Cancel" buttons.

```
<dependencies>
  <dependency>
    <groupId>org.apache.struts</groupId>
    <artifactId>struts2-core</artifactId>
    <version>2.3.16.1</version>
  </dependency>
  <dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-context</artifactId>
    <version>4.0.4.RELEASE</version>
  </dependency>
  <dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>4.3.4.Final</version>
  </dependency>
  <dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>5.1.29</version>
  </dependency>
</dependencies>
```



```
<build>
  <finalName>SSHSample</finalName>
  <plugins>
    <plugin>
      <groupId>org.apache.tomcat.maven</groupId>
      <artifactId>tomcat7-maven-plugin</artifactId>
      <version>2.2</version>
      <configuration>
        <url>http://localhost:8080/manager/text</url>
        <server>tomcat</server>
      </configuration>
    </plugin>
  </plugins>
</build>
```

Maven Build Configuration



```
erminated> SSHSample [Maven Build] C:\Program Files\Java\jre7\bin\javaw.exe (2014年5月20日 上午12:53:53)
[INFO] Deploying war to http://localhost:8080/SSHSample
[INFO] Uploading: http://localhost:8080/manager/text/deploy?path=%2FSSHSample&update=true
[INFO] Uploaded: http://localhost:8080/manager/text/deploy?path=%2FSSHSample&update=true
[INFO] tomcatManager status code:200, ReasonPhrase:OK
[INFO] OK - Undeployed application at context path /SSHSample
[INFO] OK - Deployed application at context path /SSHSample
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 14.013 s
[INFO] Finished at: 2014-05-20T00:54:09+08:00
[INFO] Final Memory: 21M/161M
[INFO] -----
```

Access the application in Browser



Example 1

- index.jsp

```
<%@ page language="java" contentType="text/html;
    charset=ISO-8859-1" pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="s" uri="/struts-tags"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type"
      content="text/html; charset=ISO-8859-1">
    <title>Basic Struts 2 Application - Welcome</title>
  </head>
  <body>
    <h1>Welcome To Struts 2!</h1>
    <p>
      <a href="<s:url action='hello'/">">Hello World</a>
    </p>
  </body>
</html>
```

Example 1

- MessageStore.java

```
public class MessageStore {  
  
    private String message;  
  
    public String getMessage() {  
        return message;  
    }  
  
    public void setMessage(String message) {  
        this.message = message;  
    }  
  
    public String toString() {  
        return message + " (from toString)";  
    }  
  
}
```

Example 1

- HelloWorldAction.java

```
public class HelloWorldAction extends ActionSupport implements SessionAware {

    private MessageStore messageStore;

    public String execute() throws Exception {
        ApplicationContext context = new ClassPathXmlApplicationContext(
            new String[] { "ExampleContext.xml" });
        messageStore = context.getBean(MessageStore.class);
        return SUCCESS;
    }

    public MessageStore getMessageStore() {
        return messageStore;
    }

    public void setMessageStore(MessageStore messageStore) {
        this.messageStore = messageStore;
    }

}
```

- ExampleContext.xml

```
<beans>
```

```
  <bean id="messageStore" class="helloworld.model.MessageStore">
```

```
    <property name="message">
```

```
      <value>No zuo no die!</value>
```

```
    </property>
```

```
</beans>
```


Example 1

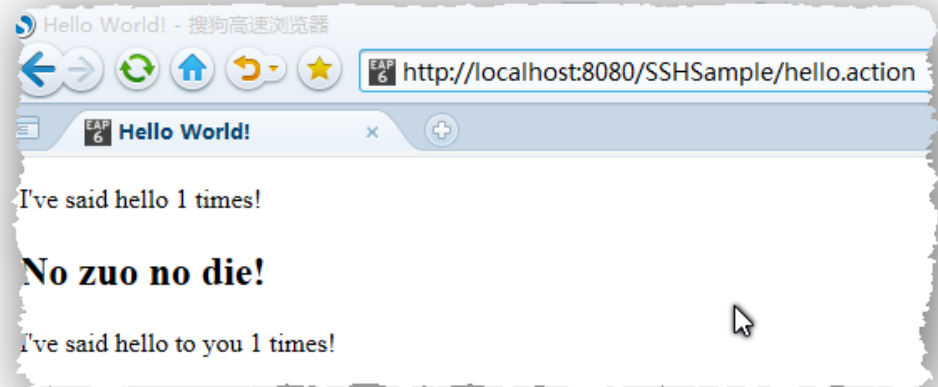
- HelloWorld.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="s" uri="/struts-tags" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
    <title>Hello World!</title>
  </head>
  <body>
    <h2><s:property value="messageStore.message" /></h2>
  </body>
</html>
```

Example 1



Example 2

- index.jsp

```
<%@ page language="java" contentType="text/html;
    charset=ISO-8859-1" pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="s" uri="/struts-tags"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type"
      content="text/html; charset=ISO-8859-1">
    <title>Basic Struts 2 Application - Welcome</title>
  </head>
  <body>
    <h1>Welcome To Struts 2!</h1>
    <p>
      <a href="<s:url action='hello'/">">Hello World</a>
    </p>
  </body>
</html>
```

Example 2

- Entity.java

```
package helloworld.model;  
  
public interface Entity {  
    public String getMessage();  
}
```

Example 2

- Event.java

```
public class Event implements Entity{
    private Long id;
    private String title;
    private Date date;

    public Event() {}

    public Long getId() { return id; }
    private void setId(Long id) { this.id = id; }

    public Date getDate() { return date; }
    public void setDate(Date date) { this.date = date; }

    public String getTitle() { return title; }
    public void setTitle(String title) { this.title = title; }

    public String getMessage(){
        return "Date: " + date + " " + "Title: " + title;
    }
}
```

Example 2

- User.java

```
public class User implements Entity{
    private Long id;
    private String firstName;
    private String lastName;
    private int age;

    public User() { }

    public Long getId() { return id; }
    private void setId(Long id) { this.id = id; }

    public String getFirstName() { return firstName; }
    public void setFirstName(String firstName) { this.firstName = firstName; }

    public String getLastName() { return lastName; }
    public void setLastName(String lastName) { this.lastName = lastName; }

    public int getAge() { return age; }
    public void setAge( int age) { this.age = age; }

    public String getMessage() {
        return "First Name: " + getFirstName() + " Last Name: " + getLastName() + " Age: " + getAge() ;
    }
}
```

Example 2

- MessageStore.java

```
public class MessageStore {

    private String message;
    private Entity entity;
    private long userid;

    public String getMessage() {
        Session session = HibernateUtil.getSessionFactory().getCurrentSession();
        session.beginTransaction();

        entity = (Entity) session.createQuery("from " +
            entity.getClass().getSimpleName() + " p where p.id = :pid").
            setParameter("pid", userid).uniqueResult();
        session.getTransaction().commit();
        return entity.getMessage();
    }

    public void setMessage(String message) {
        this.message = message;
    }

    public String toString() {
        return message + " (from toString)";
    }
}
```

Example 2

- HelloWorldAction.java

```
public class HelloWorldAction extends ActionSupport implements SessionAware {

    private MessageStore messageStore;

    public String execute() throws Exception {
        ApplicationContext context = new ClassPathXmlApplicationContext(
            new String[] { "ExampleContext.xml" });
        messageStore = context.getBean(MessageStore.class);
        return SUCCESS;
    }

    public MessageStore getMessageStore() {
        return messageStore;
    }

    public void setMessageStore(MessageStore messageStore) {
        this.messageStore = messageStore;
    }

}
```


- ExampleContext.xml

```
<beans>
```

```
  <bean id="messageStore" class="helloworld.model.MessageStore">
```

```
    <property name="message">
```

```
      <value>No zuo no die!</value>
```

```
    </property>
```

```
    <property name="userid">
```

```
      <value>2</value>
```

```
    </property>
```

```
    <property name="entity" ref="entity" />
```

```
  </bean>
```

```
  <bean id="entity" class="helloworld.model.User"/>
```

or

```
  <bean id="entity" class="helloworld.model.Event" />
```

```
</beans>
```

Example 2

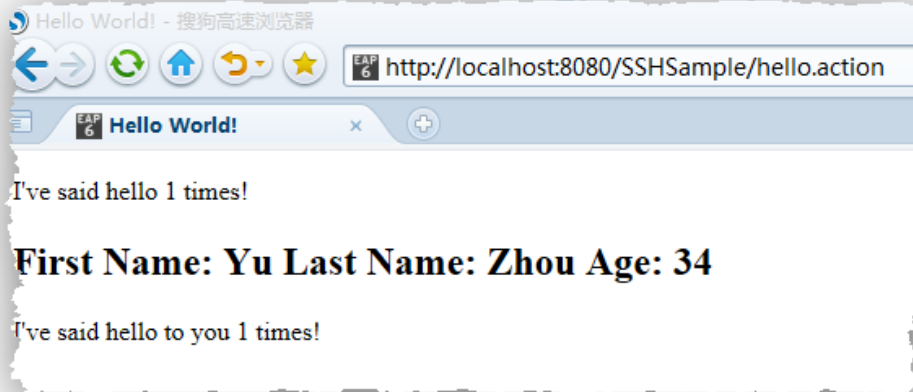
- HelloWorld.jsp

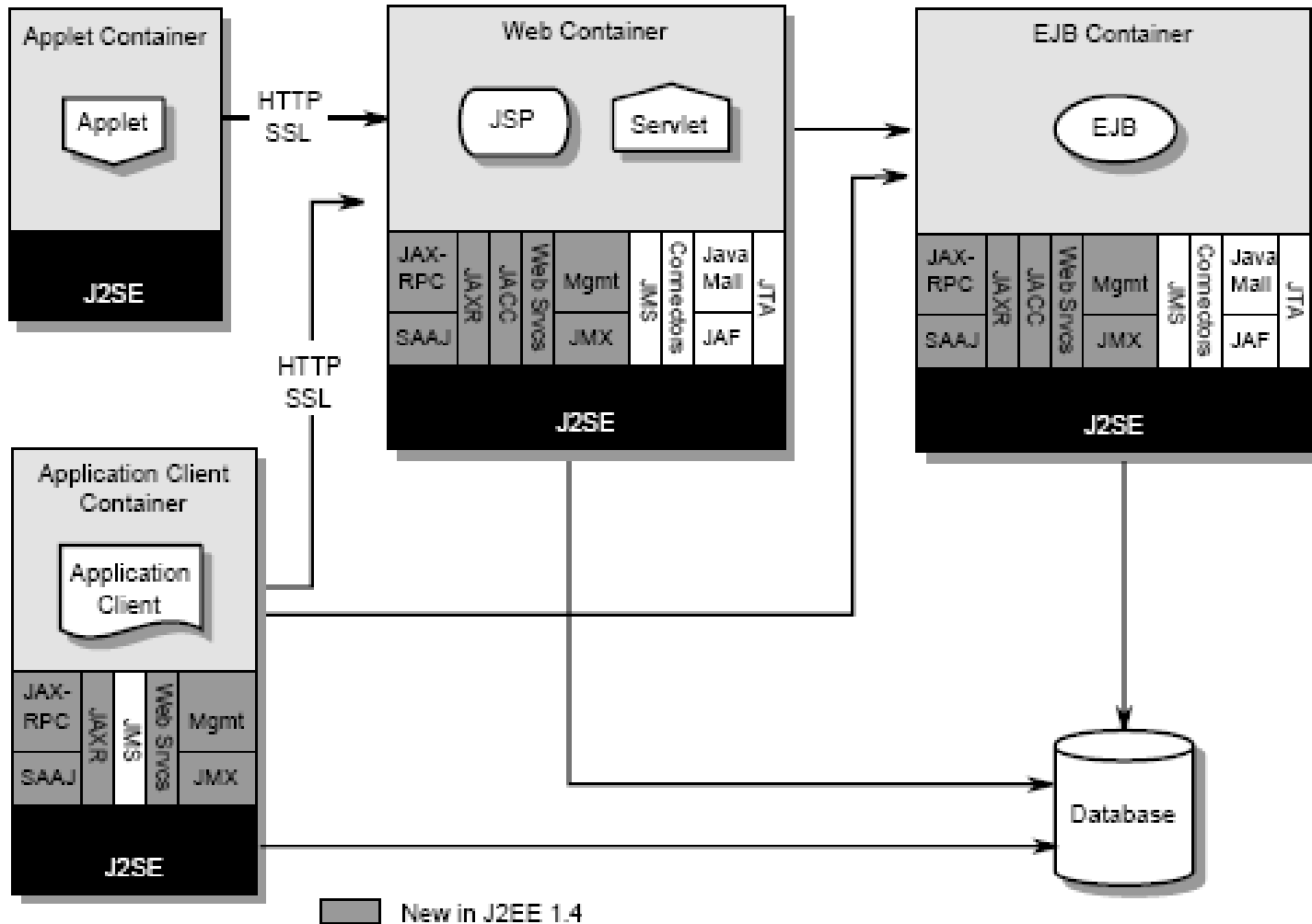
```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="s" uri="/struts-tags" %>

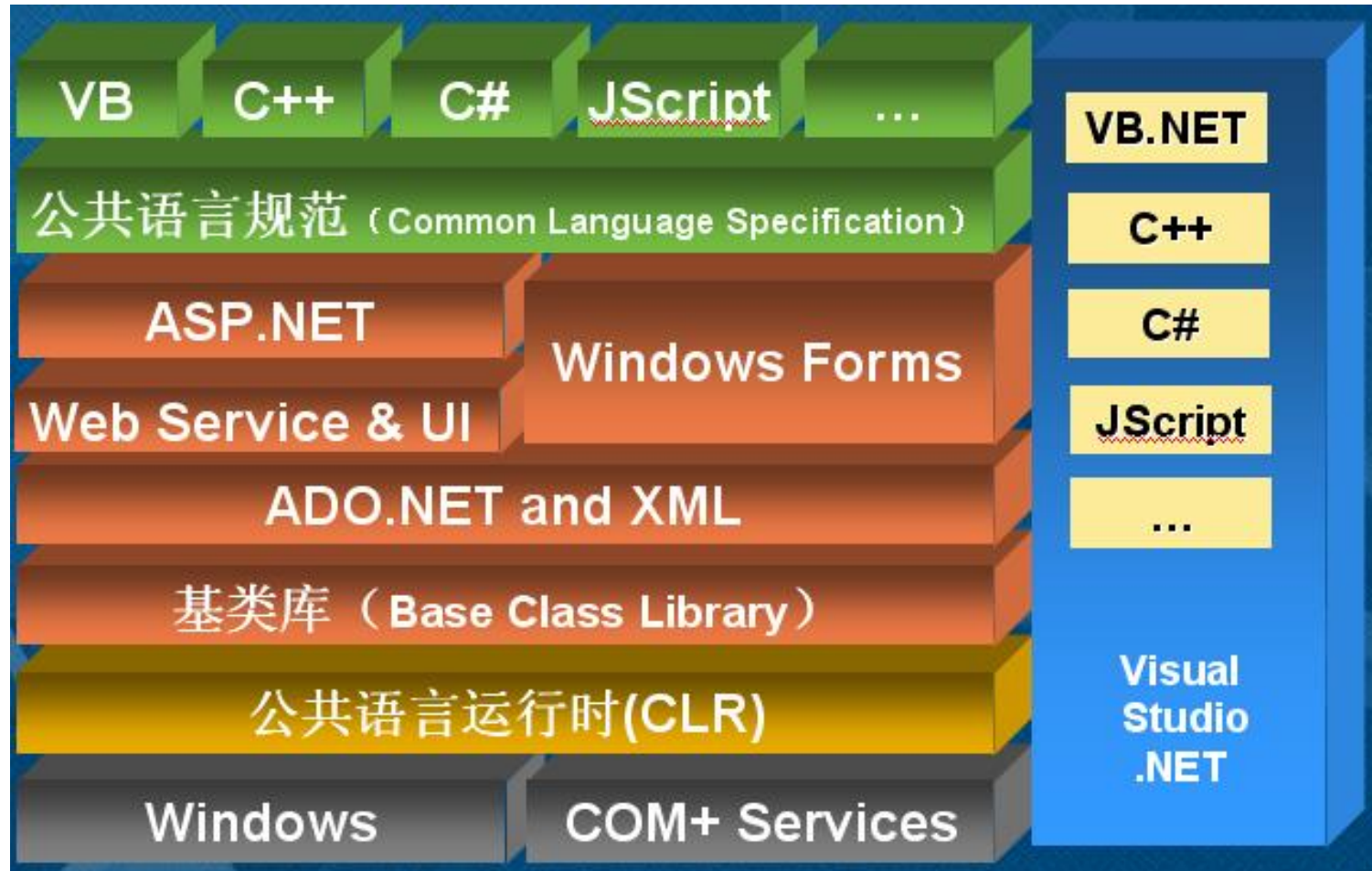
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">

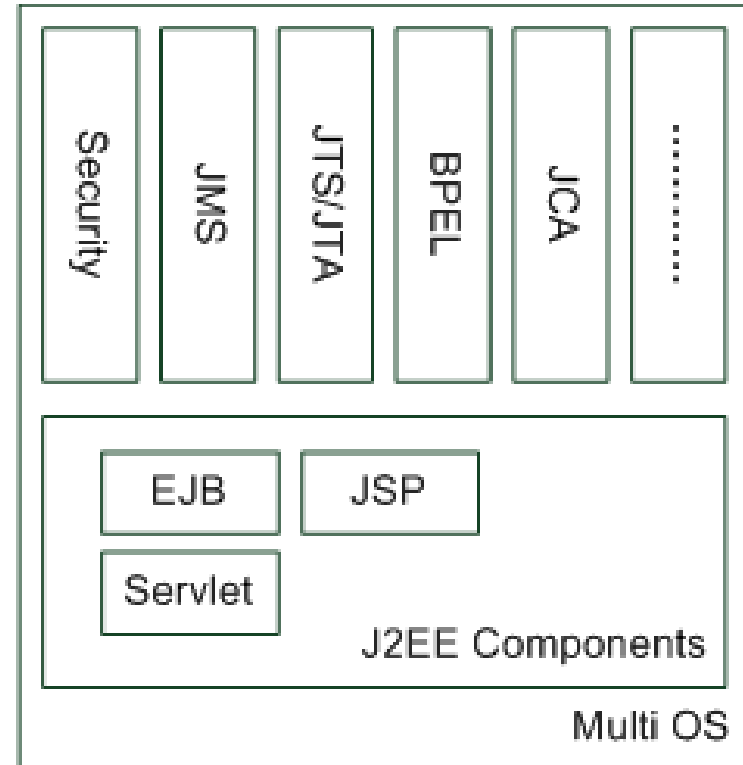
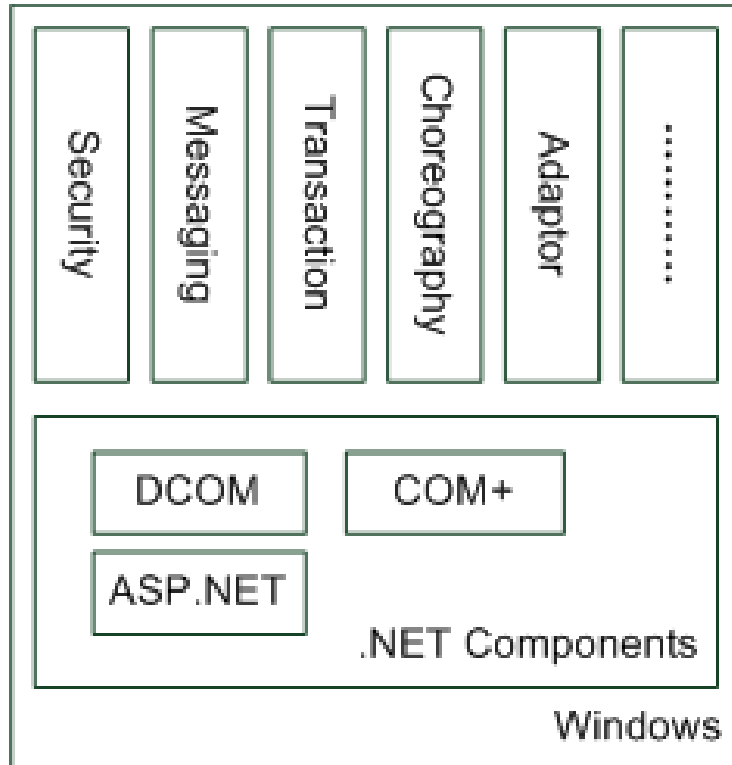
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
    <title>Hello World!</title>
  </head>
  <body>
    <h2><s:property value="messageStore.message" /></h2>
  </body>
</html>
```

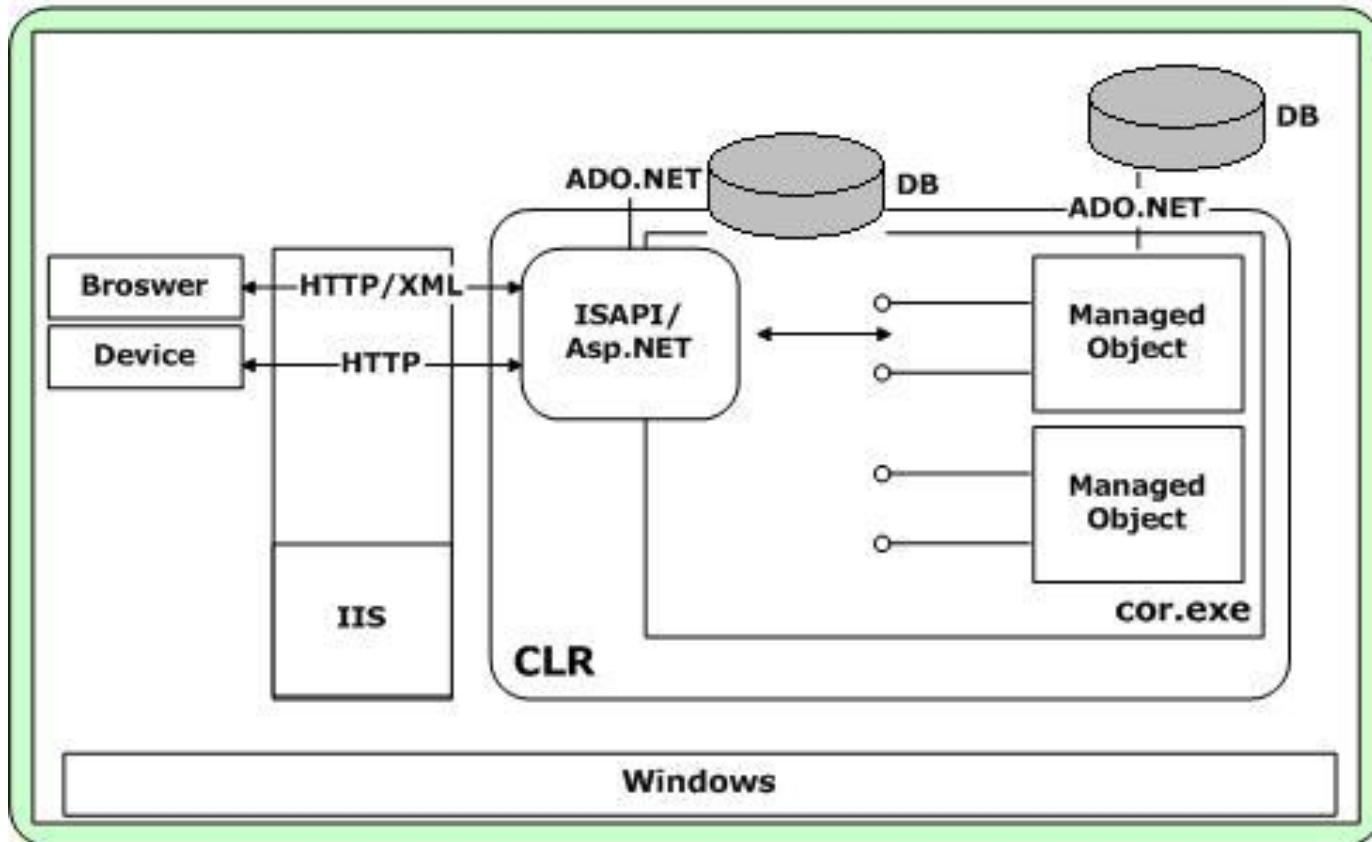
Example 2

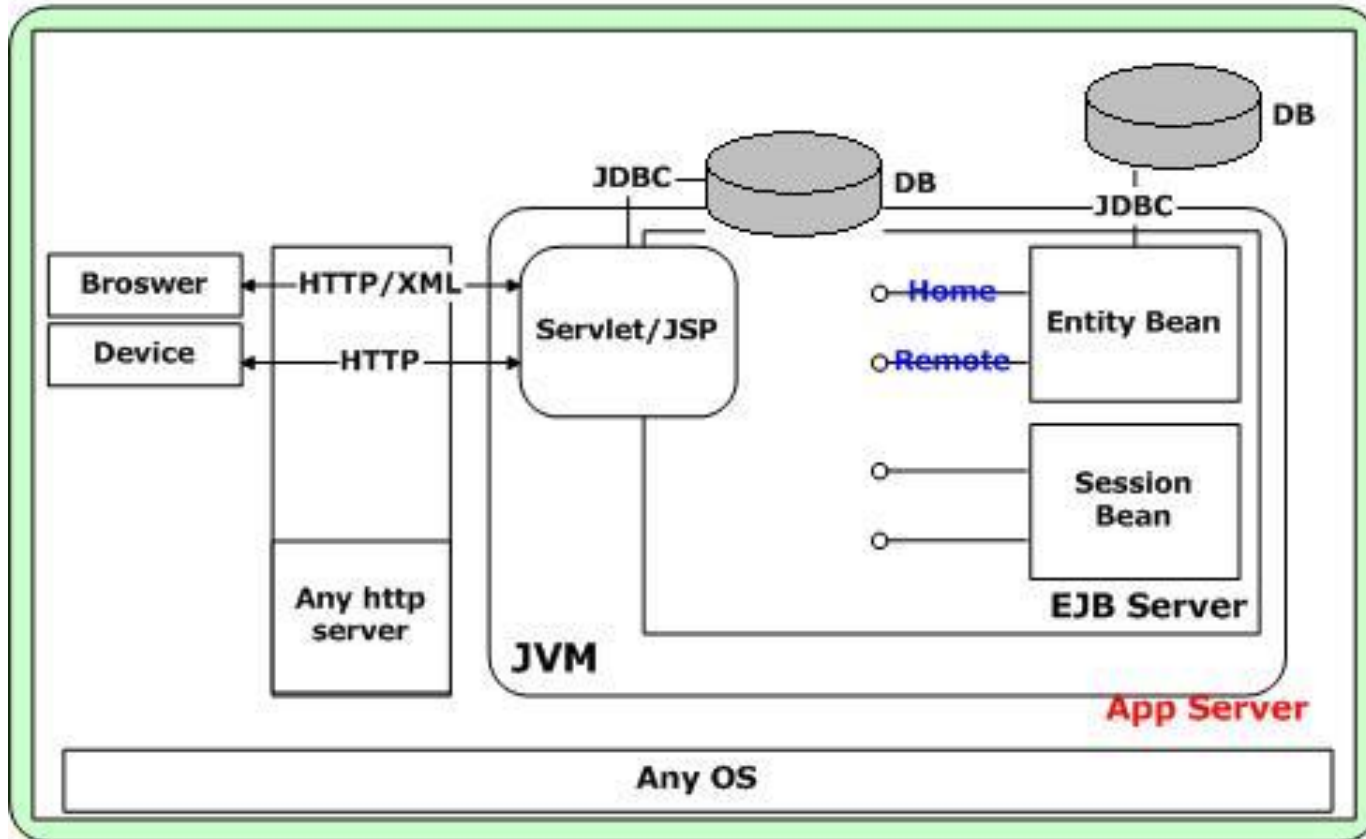












- HelloWorld1.aspx

```
<%@ Page Language="C#" ContentType="text/html" ResponseEncoding="gb2312" %>
<html>
  <head>
    <title>Hello World</title>
  </head>
  <body>
    <asp:Label id="label1" Text="Hello World"
      Font-Size="28px" Font-Bold="True" runat="server" />
  </body>
</html>
```

- HelloWorld2.aspx

```
<%@ Page Language="C#" ContentType="text/html" ResponseEncoding="gb2312" %>
<Script Language="C#" runat="Server">
    void Page_Load(Object src, EventArgs e) { label1.Text = "Hello World"; }
</Script>
<html>
    <head>
        <title>Page_Load</title>
    </head>
    <body>
        <asp:Label id="label1" Font-Size="28px" Font-Bold="True" runat="server" />
    </body>
</html>
```

- eclipse中tomcat启动后无法访问8080及无法发布到webapps下的解决办法
 - <http://lhdst-163-com.iteye.com/blog/1169355>
- Apache Tomcat Maven Plugin
 - <http://tomcat.apache.org/maven-plugin-2.2/>
- Apache Maven
 - <http://maven.apache.org/>
- Get Started with ASP.NET Web Sites
 - <http://www.asp.net/get-started/websites#web-pages>



Thank You!