

Developing the Tools Montreal 2004

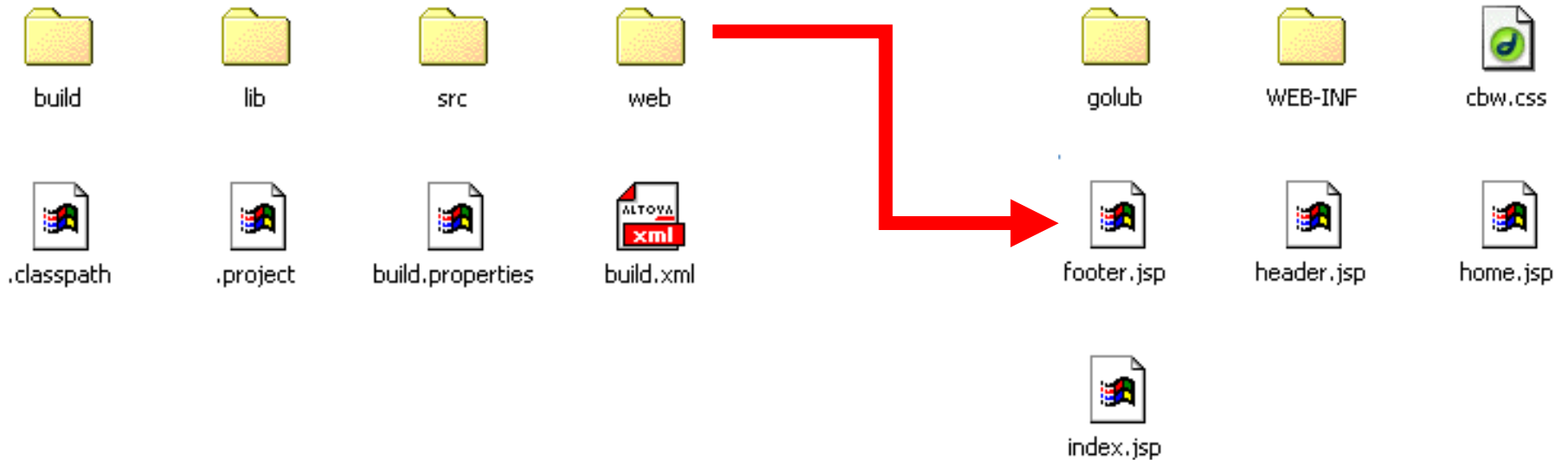
Developing Servlets & JSPs

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A Web Application File Structure



/build

/lib

/scr

/web

.classpath

.project

build.properties

build.xml

Contains the compiled web application

Contains application dependant libraries

Contains packaged source code

Contains JSPs, images, HTML, etc.

Eclipse classpath

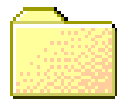
Eclipse project file

Instance specific properties

ANT build script

WEB-INF

- A special directory that protects its resources and is not accessible by the client connection.



classes



lib



web.xml

/classes

/lib

web.xml

Contains the compiled java classes including servlets

Contains application dependant libraries

Deployment descriptor that configures the web applicaiton

Deployment Descriptor: web.xml

```
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web  
Application 2.3//EN" "http://java.sun.com/dtd/web-app_2_3.dtd">  
<web-app>  
<display-name>CBW</display-name>  
<description>Canadian Bioinformatics Workshops</description>  
  
<!--Servlet Definitions-->
```

**Defines the location/package
of a servlet**



```
<servlet>  
  <servlet-name>controller</servlet-name>  
  <description>Servlet Action Controller</description>  
  <servlet-class>  
    ca.bioinformatics.cbw.framework.servlets.ControllerServlet  
  </servlet-class>  
</servlet>
```

```
<!--Continued on next slide-->
```

Deployment Descriptor: web.xml

```
<!--Servlet Mappings-->
```

Defines the URL to be mapped to the servlet defined above

```
<servlet-mapping>  
  <servlet-name>controller</servlet-name>  
  <url-pattern>/Action</url-pattern>  
</servlet-mapping>
```

```
<!--Application Configuration-->
```

Application specific configurations

```
<session-config>  
  <session-timeout>120</session-timeout>  
</session-config>
```

```
</web-app>
```



Tomcat Web Application Manager

Message:	OK
-----------------	----

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications				
Path	Display Name	Running	Sessions	Commands
/	Welcome to Tomcat	true	0	Start Stop Reload Undeploy
/admin	Tomcat Administration Application	true	0	Start Stop Reload Undeploy
/balancer		true	0	Start Stop Reload Undeploy
/bind	BIND	true	0	Start Stop Reload Undeploy
/cbw	CBW	true	1	Start Stop Reload Undeploy



- **<http://localhost:8080/manager>**

Catalina ANT Tasks

- install
 - Installs the application context
- reload
 - Reloads the application context
- start
 - Starts the web application
- stop
 - Stops the web application
- remove
 - Removes the application context

The Install Task

The Catalina install class



```
<taskdef name="install"  
  classname="org.apache.catalina.ant.InstallTask"  
>
```

```
<target name="install" description="Install Web application"  
  depends="build">
```

```
  <install url="{url}"  
    username="{username}"  
    password="{password}" path="{path}"  
    war="file://{builddir}"  
  >
```

**Instance specific variables
read in from build.properties**

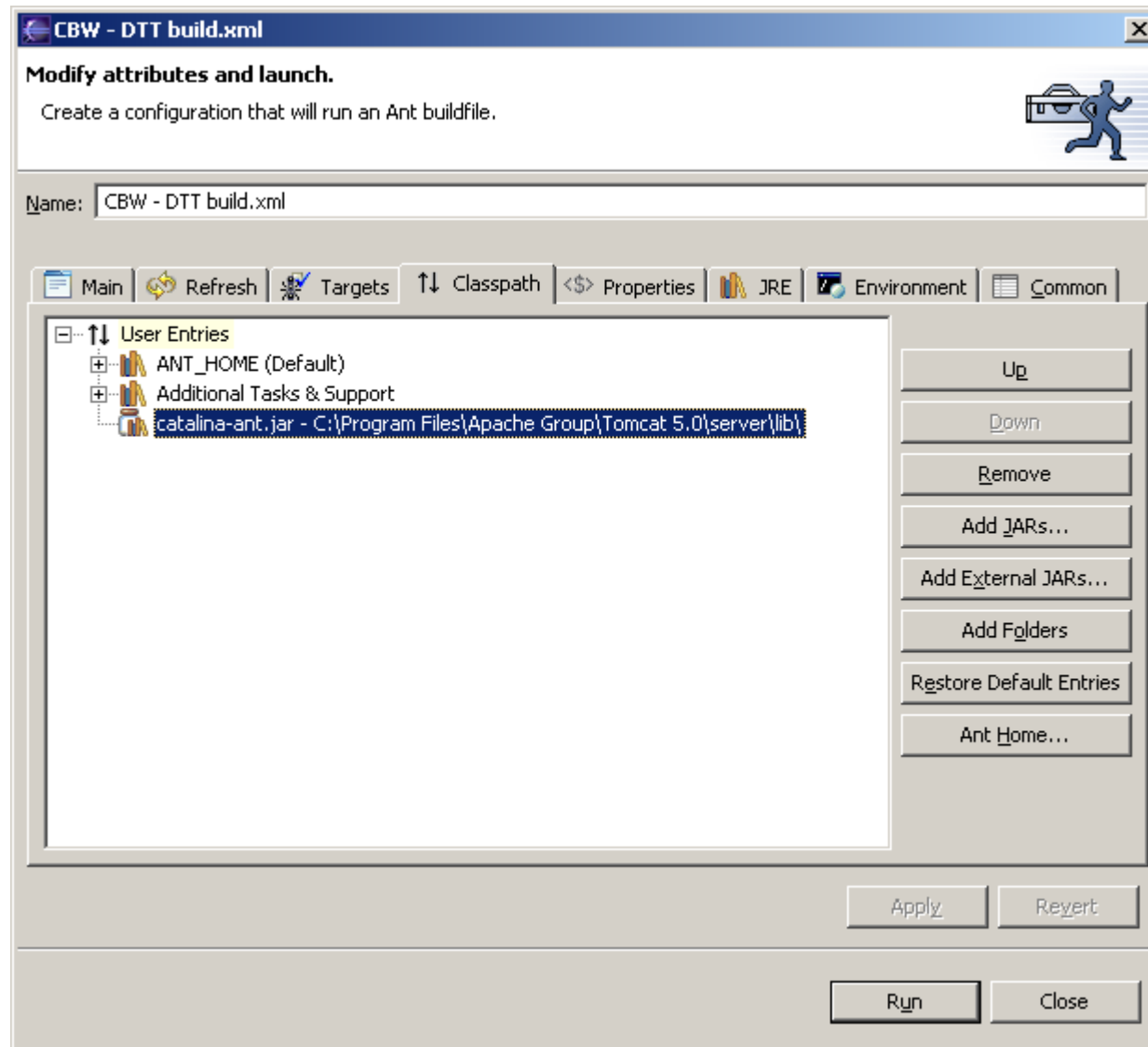


```
</target>
```

build.properties

```
url=http://localhost:8080/manager  
username=admin  
password=admin  
path=/cbw
```

Setting Up Catalina ANT In Eclipse



The Web Application Build

- After running the build ant task, the following directory structure is created



<http://localhost:8080/cbw/golub/golub.jsp>

The Web Application Control Flow

