

# Beehive Sample: NetUI Samples

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## 1. Introduction

These samples show individual NetUI features, including:

- Page Flow Action Interceptors
- [Exception Handling](#)
- [File Upload](#)
- Page Flow Lifecycle
- [Nested Page Flows](#)
- [Page Flow Inheritance](#)
- Form Posting
- [Page Inputs](#)
- Message Resources
- [Repeater Tag](#)
- [Datagrid Tag](#)
- [Tree Tag](#)
- [Popup Windows and Nested Page Flows](#)
- [Select Tag](#)
- Form Tags in a JSP 2.0 `.tag` File

## 2. Running the Samples on Tomcat 5

The following explains how to run the samples on Tomcat 5. The sample will run on other web containers, but we have chosen Tomcat 5 for convenience.

### 2.1. To Set up the Environment

Before proceeding, complete all of the necessary and optional steps in the following topic: [Beehive Installation and Setup](#)

Open a command shell and confirm that you have set following variables:

- ANT\_HOME
- JAVA\_HOME
- CATALINA\_HOME

Also ensure that the following elements are on your PATH:

- ANT\_HOME/bin
- JAVA\_HOME/bin

### 2.2. To Copy the Application to a Project Folder (Optional Step)

To keep your Beehive distribution directory pristine, you should copy the `<BeehiveRoot>/samples/netui-samples` folder to another location before proceeding.

**Note:**

`<BeehiveRoot>` refers to the top-level directory of your Beehive installation. A typical value for `<BeehiveRoot>` would be `/apache/apache-beehive-1.0`.

The following instructions assume that you have copied the folder `netui-samples` into the directory `/beehive_projects`, resulting in the following directory structure.

```
/
beehive_projects
  netui-samples
```

**Note:**

Strictly speaking, you do not need to copy the `netui-samples` directory to another location. If you wish to leave the `netui-samples` directory in place, in the instructions below you must replace occurrences of the path element `/beehive_projects` with this path element: `<BeehiveRoot>/samples`.

For example, to build the sample, run the following Ant command:

```
ant -f <BeehiveRoot>/samples/netui-samples/src/WEB-INF/build.xml clean build war
```

To delete the sample's build directory, run the clean target:

```
ant -f <BeehiveRoot>/samples/netui-samples/src/WEB-INF/build.xml clean
```

### 2.3. Edit the build.properties File

In this section you will edit the `build.properties` file--the file that sets the build-related properties for your web application.

Open the file

`/beehive_projects/netui-samples/WEB-INF/src/build.properties` in a text editor.

Edit the file so that the `beehive.home` property points to the top-level folder of your beehive installation. For example, if your beehive installation resides at `/apache/apache-beehive-1.0`, then your `build.properties` file would appear as follows.

```
beehive.home=/apache/apache-beehive-1.0

servlet-api.jar=${os.CATALINA_HOME}/common/lib/servlet-api.jar
jsp-api.jar=${os.CATALINA_HOME}/common/lib/jsp-api.jar

context.path=netui-samples
```

**Note:**

Windows users must use forwardslashes (/) not backslashes (\) in the `build.properties` file.

## 2.4. To Compile the NetUI Samples Application

To compile the NetUI samples app, enter the following Ant command:

```
ant
-f /beehive_projects/netui-samples/WEB-INF/src/build.xml
clean
build
war
```

### Copy and Paste version:

```
ant -f /beehive_projects/netui-samples/WEB-INF/src/build.xml clean build
war
```

## 2.5. To Start Tomcat

To start Tomcat, run the following command:

```
%CATALINA_HOME%\bin\startup.bat
```

Or, on non-Windows systems,

```
$CATALINA_HOME/bin/startup.sh
```

## 2.6. To Deploy to Tomcat

To deploy the samples, copy the WAR file to Tomcat's webapps directory.

On Windows:

```
copy C:\beehive_projects\netui-samples.war %CATALINA_HOME%\webapps /Y
```

### Note:

On Windows, there are file-locking issues that Tomcat versions 5.5.x and above are sensitive to. In particular, any web application that uses Struts will **fail to redeploy** if you copy in a new .war file as described here. The Commons Digester team is adding a workaround for the issue (see [this bug](#)), but in the meantime, you can work around it with the `antiResourceLocking` option in Tomcat. Just add a file called `context.xml` in a directory called `META-INF` inside the web application directory before building (so it will end up as `META-INF/context.xml` in your `controls_tutorial.war`):

```
<?xml version="1.0" encoding="UTF-8"?>
<Context antiResourceLocking="true">
</Context>
```

Everywhere else:

```
cp /beehive_projects/netui-samples.war $CATALINA_HOME/webapps
```

## 2.7. Running

To browse the various feature samples: visit the following link in a browser:

<http://localhost:8080/netui-samples>

*Beehive Sample: NetUI Samples*

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