

The Java™ Tutorials

Trail: Deployment

Lesson: Packaging Programs in JAR Files

Section: Using JAR Files: The Basics

The Java Tutorials have been written for JDK 8. Examples and practices described in this page don't take advantage of improvements introduced in later releases.

Updating a JAR File

The Jar tool provides a `u` option which you can use to update the contents of an existing JAR file by modifying its manifest or by adding files.

The basic command for adding files has this format:

```
jar uf jar-file input-file(s)
```

In this command:

- The `u` option indicates that you want to *update* an existing JAR file.
- The `f` option indicates that the JAR file to update is specified on the command line.
- `jar-file` is the existing JAR file that is to be updated.
- `input-file(s)` is a space-delimited list of one or more files that you want to add to the JAR file.

Any files already in the archive having the same pathname as a file being added will be overwritten.

When creating a new JAR file, you can optionally use the `-c` option to indicate a change of directory. For more information, see the [Creating a JAR File](#) section.

Examples

Recall that `TicTacToe.jar` has these contents:

```
META-INF/MANIFEST.MF
TicTacToe.class
TicTacToe.class
TicTacToe.java
audio/
audio/beep.au
audio/ding.au
audio/return.au
audio/yahoo1.au
audio/yahoo2.au
example1.html
images/
images/cross.gif
images/not.gif
```

Suppose that you want to add the file `images/new.gif` to the JAR file. You could accomplish that by issuing this command from the parent directory of the `images` directory:

```
jar uf TicTacToe.jar images/new.gif
```

The revised JAR file would have this table of contents:

```
META-INF/MANIFEST.MF
TicTacToe.class
TicTacToe.class
TicTacToe.java
audio/
audio/beep.au
audio/ding.au
audio/return.au
audio/yahoo1.au
audio/yahoo2.au
example1.html
```

```
images/  
images/cross.gif  
images/not.gif  
images/new.gif
```

You can use the `-c` option to "change directories" during execution of the command. For example:

```
jar uf TicTacToe.jar -C images new.gif
```

This command would change to the `images` directory before adding `new.gif` to the JAR file. The `images` directory would not be included in the pathname of `new.gif` when it's added to the archive, resulting in a table of contents that looks like this:

```
META-INF/MANIFEST.MF  
META-INF/MANIFEST.MF  
TicTacToe.class  
TicTacToe.class  
TicTacToe.java  
audio/  
audio/beep.au  
audio/ding.au  
audio/return.au  
audio/yahoo1.au  
audio/yahoo2.au  
example1.html  
images/  
images/cross.gif  
images/not.gif  
new.gif
```

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