

# Ant Pattern Usage

Continua uses an Ant-like wildcard syntax in various [Actions](#) and [workspace rules](#) to find files.

The three wild cards are:

| Character | Behavior                                            |
|-----------|-----------------------------------------------------|
| **        | Matches any files in any directories                |
| *         | Matches files in in a directory                     |
| ?         | Matches a single character in a file/directory name |

## Examples

Example file system:

```
Output\  
  Binaries\  
    App.exe  
    Installer.exe  
    Helpers\  
      setup.bat  
      cleanup.exe  
  Images\  
    logo.png  
  Website\  
    connect.jpeg  
  App\  
    error.png  
    license.jpeg  
  Source\  
    App.cs  
    MoreCode.cs  
  ServerApp.exe
```

### Wildcard Example: \*\*

To find all files ending in **.exe** you could use the pattern: **Output\\*\*.exe**

It would return the following files:

```
Output\ServerApp.exe  
Output\Binaries\App.exe  
Output\Binaries\Installer.exe  
Output\Binaries\Helpers\cleanup.exe
```

### Wildcard Example: \*

To find all **.exe** files in the **Binaries** directory and not in sub-directories you would use the pattern: **Output\Binaries\\*.exe**

It would return the following files:

```
Output\Binaries\App.exe  
Output\Binaries\Installer.exe
```

### Wildcard Example: ?

To find all files in the **Images** directory that have a file extension of 3 characters you would use the pattern: **Output\Images\\*\*.\*??**

It would return the following files:

```
Output\Images\logo.png  
Output\Images\App\error.png
```

### Mixed Wildcard Example

To find all **.exe** files in any sub-directory of the **Output** directory you would use the pattern: **Output\\*\\*\*.\*exe**

It would return the following files:

```
Output\Binaries\App.exe  
Output\Binaries\Installer.exe  
Output\Binaries\Helpers\cleanup.exe
```



For more information on Ant patterns, see the official documentation at <http://ant.apache.org/manual/dirtasks.html#patterns>