

Apache ANT

- Another Neat Tool(ANT) is a java based tool from Apaches
- Ant build files are written in XML and they take advantage of being open standard, portable and easy to understand.

Why Ant is needed

- Usually, a developer spends substantial amount of time doing mundane tasks like build and deployment that include:
 - Compiling the code
 - Packaging the binaries
 - Deploying the binaries
 - Copying the code from one location to another
- To automate and simplify the above tasks, apache ant is useful.
- It is an Operating System build and deployment tool that can be executed from the command line.

Features of Apache Ant

- Ant is most complete Java built and deployment tool.
- Ant is platform neutral
- Ant can be used to perform specific tasks.
- Ant scripts are written using plain XML.
- Ant is good at automating complicated repetitive tasks.
- Ant comes with list predefined tasks

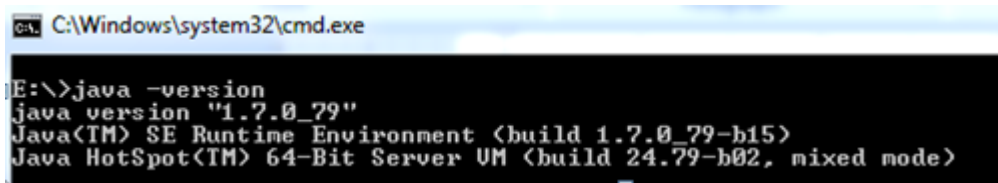
- Ant provides an interface to develop custom tasks
- Ant can be easily invoked from the command line and it can integrate with free and commercial IDEs like Eclipse, Ant's Nest and Gel.

Installing Apache Ant

- Ensure that the JAVA_HOME environment variable is set to the folder where your JDK is installed.
- Download the binaries from <http://ant.apache.org>
- Unzip the zip file to a convenient location c:\folder. using Winzip, winRAR, 7-zip or similar tools.
- Create a new environment variable called ANT_HOME that points to the Ant installation folder, in this case c:\apache-ant-1.8.2-bin folder.
- Append the path to the Apache Ant batch file to the PATH environment variable. In our case this would be the c:\apache-ant-1.8.2-bin\bin folder

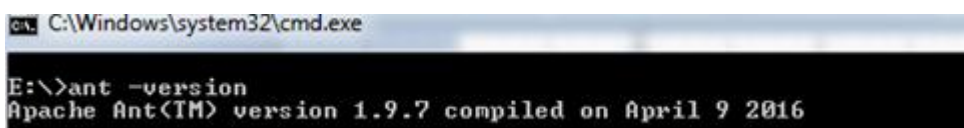
Verifying Ant and Java Installation

- To verify successful installation of Ant and Java, type the following commands through command prompt
- JAVA



```
C:\Windows\system32\cmd.exe
E:\>java -version
java version "1.7.0_79"
Java(TM) SE Runtime Environment (build 1.7.0_79-b15)
Java HotSpot(TM) 64-Bit Server VM (build 24.79-b02, mixed mode)
```

- ANT



```
C:\Windows\system32\cmd.exe
E:\>ant -version
Apache Ant(TM) version 1.9.7 compiled on April 9 2016
```

Ant –Build file

- The default Ant's build file is build.xml
- It should reside in the base directory of the project, but there is no restriction on the file name or its location.
- All build files require the project element and at least one target element.

```
<?xml version="1.0"?>
```

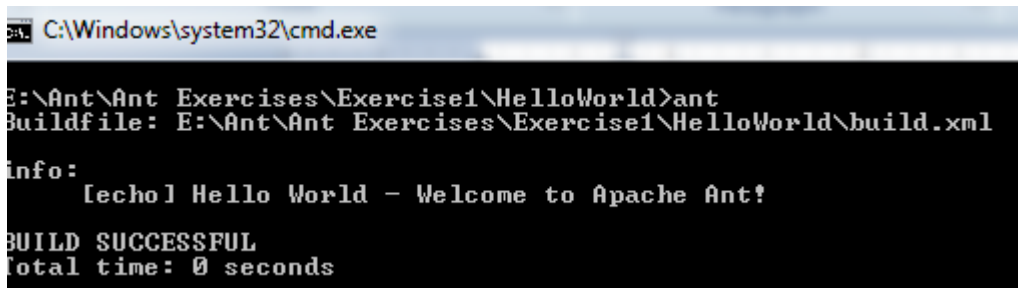
```
<project name="Hello World Project" default="info">
```

```
<target name="info">
```

```
<echo>Hello World - Welcome to Apache Ant!</echo>
```

```
</target>
```

Output



```
C:\Windows\system32\cmd.exe

E:\Ant\Ant Exercises\Exercise1\HelloWorld>ant
Buildfile: E:\Ant\Ant Exercises\Exercise1\HelloWorld\build.xml

info:
[echo] Hello World - Welcome to Apache Ant!

BUILD SUCCESSFUL
Total time: 0 seconds
```