



Need for a Build Tool

On an average, a developer spends a substantial amount of time doing the following jobs...

- Compiling the code
- Packaging the binaries
- Deploying the binaries to the test server
- Testing the changes
- Copying the code from one location to another

Ant - Build Files

- Ant's build file, called **build.xml** should reside in the base directory of the project.

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

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

```
    <target name="info"> <echo>Hello World  
      - Welcome to Apache Ant!</echo>
```

```
    </target>
```

```
  </project>
```

NOTE : There should be no blank line(s) or whitespace(s) before the xml declaration.

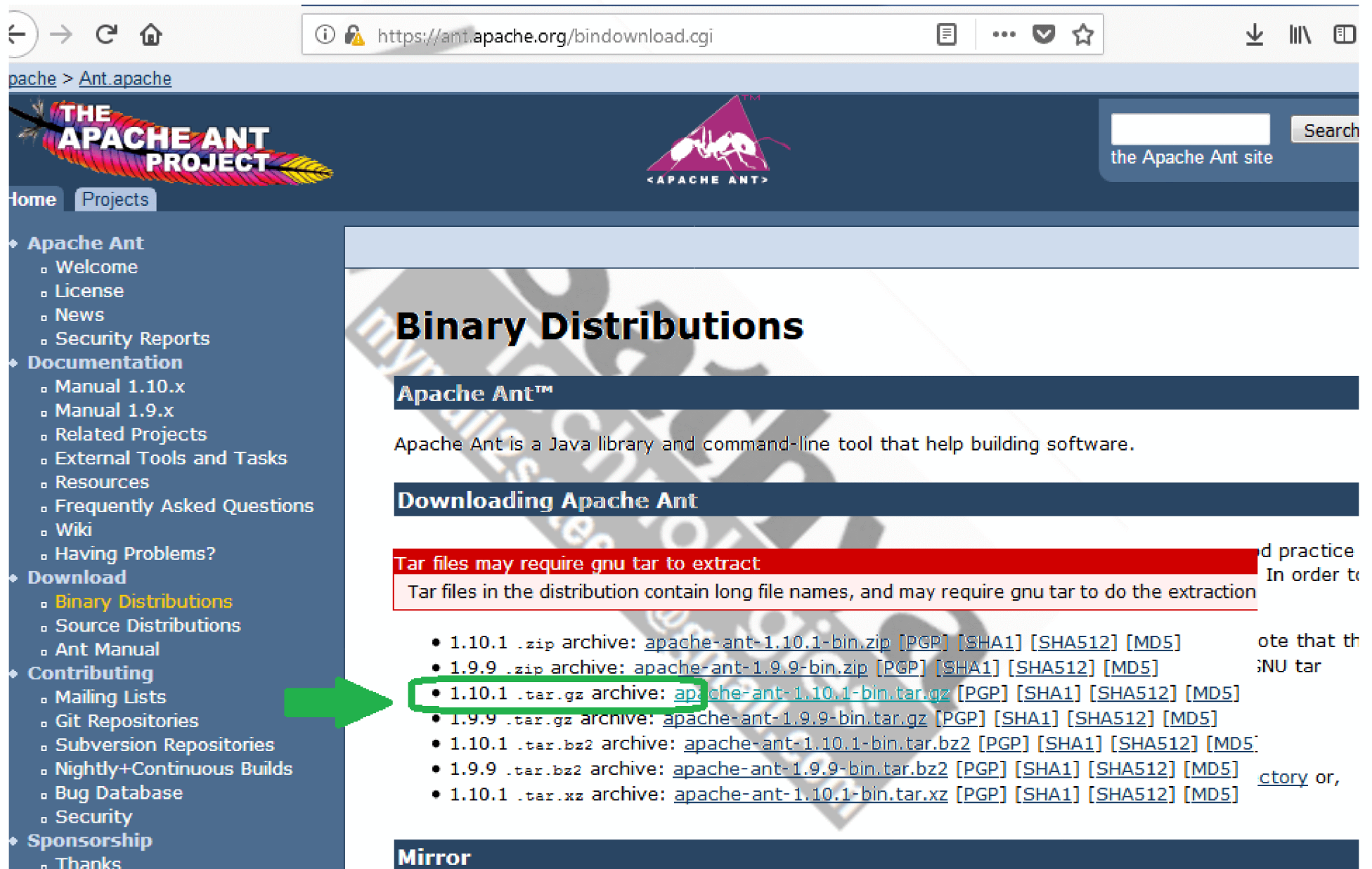
XML element **project** attributes :

Attributes	Description
name	The Name of the project. (Optional)
default	The default target for the build script. A project may contain any number of targets. This attribute specifies which target should be considered as the default. (Mandatory)
basedir	The base directory (or) the root folder for the project. (Optional)

Apache Ant Installation on Ubuntu

- `#apt-get update`
- `#apt-get install openjdk-7-jdk -y`
- `#apt-get install tomcat7 -y`
- `#apt-get install git-core -y`
- `#apt-get install ant -y`
- `#ant -version`

Distribution Installation



The screenshot shows the Apache Ant website at <https://ant.apache.org/bindownload.cgi>. The page title is "Binary Distributions". The left sidebar contains a navigation menu with the following items:

- Apache Ant
 - Welcome
 - License
 - News
 - Security Reports
- Documentation
 - Manual 1.10.x
 - Manual 1.9.x
 - Related Projects
 - External Tools and Tasks
 - Resources
 - Frequently Asked Questions
 - Wiki
 - Having Problems?
- Download
 - Binary Distributions**
 - Source Distributions
 - Ant Manual
- Contributing
 - Mailing Lists
 - Git Repositories
 - Subversion Repositories
 - Nightly+Continuous Builds
 - Bug Database
 - Security
- Sponsorship
 - Thanks

The main content area has the following sections:

Binary Distributions

Apache Ant™

Apache Ant is a Java library and command-line tool that help building software.

Downloading Apache Ant

Tar files may require gnu tar to extract

Tar files in the distribution contain long file names, and may require gnu tar to do the extraction

- 1.10.1 .zip archive: [apache-ant-1.10.1-bin.zip](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.9.9 .zip archive: [apache-ant-1.9.9-bin.zip](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.10.1 .tar.gz archive: [apache-ant-1.10.1-bin.tar.gz](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.9.9 .tar.gz archive: [apache-ant-1.9.9-bin.tar.gz](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.10.1 .tar.bz2 archive: [apache-ant-1.10.1-bin.tar.bz2](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.9.9 .tar.bz2 archive: [apache-ant-1.9.9-bin.tar.bz2](#) [PGP] [SHA1] [SHA512] [MD5]
- 1.10.1 .tar.xz archive: [apache-ant-1.10.1-bin.tar.xz](#) [PGP] [SHA1] [SHA512] [MD5]

Mirror

Distribution Installation

```
#vi ~/.profile (or) #vi ~/.bashrc
```

```
export JAVA_HOME="/opt/jdk1.8.0_151"
```

```
export PATH=$JAVA_HOME/bin:$PATH
```

```
export CATALINA_HOME="/opt/apache-tomcat-9.0.2"
```

```
export PATH=$CATALINA_HOME/bin:$PATH
```

```
export M2_HOME="/opt/apache-maven-3.5.2"
```

```
export PATH=$M2_HOME/bin:$PATH
```

```
export ANT_HOME="/opt/apache-ant-1.10.1"
```

```
export PATH=$ANT_HOME/bin:$PATH
```

```
# source .profile
```

Building a Project

Download a Project:

```
#git clone
```

```
https://github.com/sathyadevops/antproj.git
```

```
#cd antproj
```

```
#vi build.xml
```

```
#ant (it generates .war file in /dist dir)
```

```
#cp ./dist/AntExample.war  
/var/lib/tomcat7/webapps/
```

```
#service tomcat7 restart
```

Open browser <http://ip:8080/AntExample>