

## **ANT :-**

Ant is Java based build tool with the full probability of pure java code.

Ant is acronym for “**Another Neat Tool**” . Apache Ant is a software Tool for automating software build processes.

- It is open source maintained by Apache.
- Ant is cross plat form and portable.

### **What Ant does:-**

- Ant can get source code from version control
- Ant can compile source code
- Ant can run unit tests
  - Junit4, Junit5, TestNG or any arbitrary test application
- Ant can package compiled code and resources
  - Jars,wars, tars,zip, whatever

## **ANT Build:-**

- Builds run on both Windows and Unix / Linux systems.
- Should run anywhere java VM runs.
- Easy to extend with Java

### **Step 1:-**

Download and unzip Ant from the below link

<https://ant.apache.org/manual/install.html>

### **Step 2:-**

Set Environment Variables for Ant

ANT\_HOME = C:\Program Files\apache-ant-1.10.12-bin\apache-ant-1.10.12

Path = %ANT\_HOME%/bin

Step 3:-

After setting env variables open cmd check Ant is available or not

If you got below message you have done everything correct!!

Buildfile: build.xml does not exist!  
Build failed

Step 4:- Create Java project in Eclipse using Apache Ant

### Structure of Build.xml file:-

```
<?xml version="1.0"?>  
  
  <Project name= "MyFirstAntProject" //Root tag  
    default = "MyTarget">  
    <target name = "init"> //collections of action  
    <echo> Running Target Init </echo> //actual action  
    </target>  
    <target name ="MyTarget" depends = "init">  
    <echo> Running Target MyTarget </echo>  
    </target>  
  </project>
```

### Tasks Tag:-

1.File System tasks:-

=>Echo,mkdir,delete,copy, move

2.Java related task:-

=>Javac , jar, war

3.Properties:-

=><property name = "clsdir" value="classes">

=>Build.xml

=>Build.properties (K,V)

=>Command Prompt -D

4.External tasks

5.Advanced Task

=>Zip,unzip,antcall,antfile

In order to build Jar/War file for deployment we will use Ant build Tool:-

build.xml will take care of all the below steps

1. Checkout
2. Set class path
3. Compile war file

**Example 1:-**

```
<project name="test" default="A" basedir=".">

    <target name="A" depends="B">
        <echo> Hi!!! This is My First Ant Script </echo>
    </target>

    <target name="B" depends="C">
        <echo> Hi!!! This is My First Ant Script </echo>
    </target>

    <target name="C">

<property name="x" value="10"/>

        <echo message="x value is ${x}"/>

        <echo> Hi!!! This is My First Ant Script </echo>

    </target>

</project>
```

### **Example2:-**

#### Build.properties file

```
property name="src.dir" value="src"  
property name="build.dir" value="build"  
property name="classes.dir" value="${build.dir}/class"  
property name="lib.dir" value="RunningPowerJars"
```