Ant

Ant

Ant is a tool for automatically building your code. Put this file in the directory with your source: `build.xml`. Now to build your code just type `ant`. Ant will try to be intelligent about which files need to be recompiled based on the changes you have made. Sometimes you need to rebuild the whole tree, however. In that case, type `ant clean` to delete all your classfiles, and then type `ant` to rebuild. You'll notice Ant creates a directory named `depcache`; this is a dependency cache that helps it build faster. You can safely delete it, but your next build will be slightly slower as it is recreated.

Ant can also automatically upload your files to the geode. Open `build.xml` and set the appropriate IP address (`robotIP`) and destination directory (`destDir`). Then typing `ant upload` will build all your software and then upload it to the geode. You should set up passwordless login (see SSH) to avoid typing your password every time.

Ant is in the `sipb` locker (`add sipb`).

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build.xml

```
<project name="maslab" default="build" basedir=".">
  <!-- CHANGE THESE THREE VALUES FOR AUTOMATIC UPLOAD -->
  <property name="robotIP" value="18.251.0.140"/>
  <property name="destDir" value="/home/edward"/>
  <property name="username" value="root"/>
  <target name="build">
    <!-- This does deep dependency checking on class files -->
    <depend srcdir="." cache="depcache" closure="true"/>
    <!-- This compiles all the java -->
    <javac srcdir="." includes="**/*.java" debug="true"
classpath="/mit/6.186/maslab.jar:."/>
  </target>
  <!-- Clean everything -->
  <target name="clean">
    <delete>
      <fileset dir="." includes="**/*.class"/>
      <fileset dir="." includes="**/*~" defaultexcludes="no"/>
    </delete>
  </target>
  <!-- Upload files to robot -->
  <target name="upload" depends="build">
    <exec executable="rsync">
      <arg line="-e ssh -avr . ${username}@${robotIP}:${destDir}"/>
    </exec>
  </target>
</project>
```
