

Build Automation

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Ant

[Ant](#) is a build automation tool, like `make`. Install it however you want (like with homebrew on a Mac), then put this in a file named `build.xml` in the root directory of your blackjack project:

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="blackjack" default="default" basedir=". ">
  <path id="classpath">
    <fileset dir="target/classes" includes="**/*.class"/>
  </path>

  <target name="init">
    <mkdir dir="target"/>
    <mkdir dir="target/classes"/>
  </target>

  <target name="compile" depends="init">
    <javac srcdir="src/main/java"
          destdir="target/classes"
          classpathref="classpath"
          source="1.7"
          target="1.7" />
  </target>
</project>
```

Compiling with Ant

Invoke the `compile` target to compile the project:

```
$ ant compile
Buildfile: /Users/chris/scratch/blackjack/build.xml

init:
...
compile:
...
BUILD SUCCESSFUL
Total time: 0 seconds
```

This will produce class files in `target/classes`. How would you run the Blackjack class?

Runnable Jar Files

The hard way: [Oracle's Jar docs](#)

The easy way: add this to your `build.xml`:

```
<target name="package" depends="compile">
  <jar destfile="target/blackjack.jar">
    <fileset dir="target/classes"/>
    <manifest>
      <attribute name="Main-class"
        value="edu.gatech.cs2340.blackjack.Blackjack"/>
    </manifest>
  </jar>
</target>
```

Then you can do:

```
$ ant package
...
BUILD SUCCESSFUL
Total time: 0 seconds
$ java -jar target/blackjack.jar
```

Generating Documentation

Add this target to your build.xml

```
<target name="javadoc" description="Generate Javadoc"
  depends="compile">
  <javadoc destdir="target/docs/api"
    classpathref="classpath"
    access="private"
    version="true"
    use="true"
    author="true"
    overview="src/main/java/overview.html">
    <fileset dir="src/main/java" defaultexcludes="yes">
      <include name="**/*.java" />
    </fileset>
    <doctitle>
      <![CDATA[<h1>Blackjack API Documentation</h1>]]>
    </doctitle>
    <bottom>
      <![CDATA[<i>Copyright &#169; Georgia Tech. All Rights
Reserved.</i>]]>
    </bottom>

    <link href="http://docs.oracle.com/javase/7/docs/api/" />
  </javadoc>
```