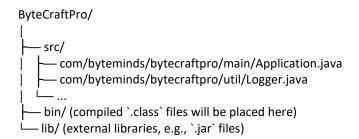
Running JVM Applications on the Command Line

1. Setting Up the Project

Assume the following project structure for ByteCraft Pro:



2. Compilation and Execution Steps

Step 1: Compile the Java Files

Navigate to the project root directory (ByteCraftPro) in the terminal and run:

javac -d bin -cp lib/* src/com/byteminds/bytecraftpro/main/Application.java

Explanation:

- -d bin: Specifies the output directory for .class files.
- -cp lib/*: Adds all libraries in the lib directory to the classpath.
- src/com/byteminds/bytecraftpro/main/Application.java: The main Java file to compile.

This will generate .class files in the bin directory, preserving the package structure.

Step 2: Run the Application

Run the compiled application using:

java -cp bin:lib/* com.byteminds.bytecraftpro.main.Application

Explanation:

- -cp bin:lib/*: Specifies the classpath, including the bin directory and external libraries. Use; instead of: on Windows.
- com.byteminds.bytecraftpro.main.Application: Fully qualified name of the main class containing the public static void main(String[] args) method.

3. Handling System Properties and Command-Line Arguments

System Properties

You can pass system properties using the -D option.

Example:

java -Dconfig.path=/path/to/config -cp bin:lib/* com.byteminds.bytecraftpro.main.Application

Access the property in your code using:

String configPath = System.getProperty("config.path");

Command-Line Arguments

Command-line arguments are passed after the class name.

Example:

java -cp bin:lib/* com.byteminds.bytecraftpro.main.Application arg1 arg2

Access the arguments in the main method:

```
public static void main(String[] args) {
for (String arg : args) {
   System.out.println("Argument: " + arg);
}
```

4. Practical Considerations

Classpath Considerations

- Use -cp to include multiple .jar files and directories.
- Ensure libraries are placed in the lib directory for consistency.

Debugging Logs

Use a utility class like Logger to standardize debug messages during execution.

5. Example Run

Assuming the Application class uses a system property (config.path) and reads command-line arguments:

java -Dconfig.path=./config -cp bin:lib/* com.byteminds.bytecraftpro.main.Application user1 admin

Output:

Config Path: ./config Argument: user1 Argument: admin