

Create a new application managed by Maven in IntelliJ IDEA.

Set `maven.compiler.source` and `maven.compiler.target` to 1.8 in the `pom.xml`.

Add *build* section to the `pom.xml` and set *finalName*.

Add a *manifest* to the project.

Add a *manifest* section to the `pom.xml`

Add class *Main* with method *main*.

Create jar file by command *mvn package*

Run your application in the terminal

Create array of integers of size `N=10_000_000` in the method *main*

Run the application with VM options: `-Xmx64m -Xms64m`

Increase `N` (in your code) to achieve `java.lang.OutOfMemoryError`

On base of `N` and `Xmx` estimate the size of *int*

Can you change the code to achieve better precision?