# Prime Finder application instructions

#### Prerequisites

* Java Development Kit 1.8

## Building console application

*Require Internet connection to load project dependencies.*

1. Go to project root directory
2. Run ./gradlew jar

The above steps will build the application and places the compiled prime.jar in build/libs/ directory.

### Running the application from command line.

After building jar, you can run the application from project root directory with the following command.

java -jar build/libs/prime.jar <Prime Search Limit> [Threads]

*When thread value is not provided or less than 1, the program executes in main thread.*

### Running sample from gradle.

You can directly run the application from the gradle build with defaults(*100 and 5*) set in build.gradle file. Run the following command in project root directory.

./gradlew run

## Building web application

1. Go to project root directory
2. Run ./gradlew war

The above steps will create a web application archive prime.war inside build/libs/ directory.

### Running web application.

Using jetty gradle plugin which adds embedded container to build process, the web application can be verified. To run the embedded Jetty web container, run the following command in project root directory.

./gradlew jettyRunWar

*This command starts a webserver using port* ***8080****. If port 8080 is already in use, please change the port number in build.gradle file.*

Once the web container is running, you can access the site using following <http://localhost:8080/prime/> url.

*Require Internet connection to load Bootstrap files through CDN*

## Viewing and modifying source code.

To view and edit code in Eclipse or IntelliJ you can run the below commands in the project root directory.

For Eclipse:

./gradlew eclipse

*This command will generate Eclipse .project and .classpath files.*

For IntelliJ Idea

./gradlew idea

*This command will generate IntelliJ Idea project files.*

### Viewing additional Gradle tasks.

To view all the Gradle tasks available in the build, run the following commands.

./gradlew tasks

### Java 8 feature usage

1. Java 8 lambda expression and IntStream is used in com.mujahidk.prime.module.SlowPrimeFinder.
2. Java 8 lambda expression is used in com.mujahidk.prime.strategy.MultiThreadConsoleHandler.

### Other technical details

1. For build, Gradle 2.14.1 is used.
2. There are few JUnit test cases.
3. Basic use of Bootstrap.