

## Individual -- Maven & Web Application

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GitHub Repository: [https://github.com/UnkleSam/Software\\_QualityLab2](https://github.com/UnkleSam/Software_QualityLab2)

### Screenshots for Testing

```
2024-02-16 20:25:55.896 INFO 22436 --- [main] o.s.s.concurrent.ThreadPoolTaskExecutor : Initializing ExecutorService 'applicationTaskExecutor'
2024-02-16 20:25:56.125 INFO 22436 --- [main] o.s.b.t.m.w.SpringBootMockServletContext : Initializing Spring TestDispatcherServlet ''
2024-02-16 20:25:56.125 INFO 22436 --- [main] o.s.t.web.servlet.TestDispatcherServlet : Initializing Servlet ''
2024-02-16 20:25:56.143 INFO 22436 --- [main] o.s.t.web.servlet.TestDispatcherServlet : Completed initialization in 17 ms
2024-02-16 20:25:56.187 INFO 22436 --- [main] c.o.sofe3980U.HelloControllerTest : Started HelloControllerTest in 1.433 seconds (JVM running for 2.224)
[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 2.432 s - in com.ontariotechu.sofe3980U.HelloControllerTest
2024-02-16 20:25:56.712 INFO 22436 --- [Thread-2] o.s.s.concurrent.ThreadPoolTaskExecutor : Shutting down ExecutorService 'applicationTaskExecutor'
[INFO] Results:
[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] >>> spring-boot:2.1.2.RELEASE:run (default-cli) > test-compile @ BinaryCalculatorWebapp >>>
[INFO]
[INFO] --- resources:3.1.0:resources (default-resources) @ BinaryCalculatorWebapp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 0 resource
[INFO] Copying 1 resource
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ BinaryCalculatorWebapp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to C:\Users\kanis\lab2\BinaryCalculatorWebapp\target\classes
[INFO]
[INFO] --- resources:3.1.0:testResources (default-testResources) @ BinaryCalculatorWebapp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\kanis\lab2\BinaryCalculatorWebapp\src\test\resources
[INFO]
[INFO] --- compiler:3.8.0:testCompile (default-testCompile) @ BinaryCalculatorWebapp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\Users\kanis\lab2\BinaryCalculatorWebapp\target\test-classes
[INFO]
[INFO] <<< spring-boot:2.1.2.RELEASE:run (default-cli) < test-compile @ BinaryCalculatorWebapp <<<
[INFO]
[INFO] --- spring-boot:2.1.2.RELEASE:run (default-cli) @ BinaryCalculatorWebapp ---
[INFO] Attaching agents: []
```

```
[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.654 s - in com.ontariotechu.sofe3980U.HelloControllerTest
2024-02-16 20:41:28.490 INFO 13328 --- [Thread-4] o.s.s.concurrent.ThreadPoolTaskExecutor : Shutting down ExecutorService 'applicationTaskExecutor'
2024-02-16 20:41:28.490 INFO 13328 --- [Thread-2] o.s.s.concurrent.ThreadPoolTaskExecutor : Shutting down ExecutorService 'applicationTaskExecutor'
[INFO] Results:
[INFO] Tests run: 8, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] >>> spring-boot:2.1.2.RELEASE:run (default-cli) > test-compile @ BinaryCalculatorWebapp >>>
[INFO]
[INFO] --- resources:3.1.0:resources (default-resources) @ BinaryCalculatorWebapp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 0 resource
[INFO] Copying 1 resource
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ BinaryCalculatorWebapp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 4 source files to C:\Users\kanis\lab2\BinaryCalculatorWebapp\target\classes
[INFO]
[INFO] --- resources:3.1.0:testResources (default-testResources) @ BinaryCalculatorWebapp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\kanis\lab2\BinaryCalculatorWebapp\src\test\resources
[INFO]
[INFO] --- compiler:3.8.0:testCompile (default-testCompile) @ BinaryCalculatorWebapp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to C:\Users\kanis\lab2\BinaryCalculatorWebapp\target\test-classes
[INFO]
[INFO] <<< spring-boot:2.1.2.RELEASE:run (default-cli) < test-compile @ BinaryCalculatorWebapp <<<
[INFO]
[INFO] --- spring-boot:2.1.2.RELEASE:run (default-cli) @ BinaryCalculatorWebapp ---
[INFO] Attaching agents: []
```

```
@Test
public void postInvalidBinaryValues() throws Exception {
    this.mvc.perform(post( uriTemplate: "/" ).param( name: "operand1", ...values: "xyz" ).param( name: "operator", ...values: "+" ).param( name: "operand2", ...values: "111" ))
        .andExpect(status().isOk())
        .andExpect(view().name(is("error")))
        .andExpect(model().attribute( name: "errorMessage", value: "Invalid binary value(s)"));
}

@Test
public void postInvalidOperator() throws Exception {
    this.mvc.perform(post( uriTemplate: "/" ).param( name: "operand1", ...values: "101" ).param( name: "operator", ...values: "&" ).param( name: "operand2", ...values: "110" ))
        .andExpect(status().isOk())
        .andExpect(view().name(is("error")))
        .andExpect(model().attribute( name: "errorMessage", value: "Invalid operator"));
}

@Test
public void postMissingOperand() throws Exception {
    this.mvc.perform(post( uriTemplate: "/" ).param( name: "operand1", ...values: "101" ).param( name: "operator", ...values: "*" )) // Missing operand2
        .andExpect(status().isOk())
        .andExpect(view().name(is("error")))
        .andExpect(model().attribute( name: "errorMessage", value: "Missing operand"));
}
```