Technische Hochschule Rosenheim

Exercise 12 – Junit Tests

Task 1 – A simple test scenario

In this task, you will use the solution from a former exercise and replace the test methods that were implemented using the `main()`–method by JUnit5 tests. Here, we use the classes `Palindrome` and `PasswordChecker` as the classes to be tested and the classes `FormerPalindromeCheck` and `FormerPasswordCheckerTest` contain the test cases we want to transfer to JUnit5.

a) Create new classes `PalindromeCheck` and `PasswordCheckerTest`. Make sure to `import org.junit.jupiter.api.Assertions.`
b) Create a new method `isPalindromeTest` and mark it with `@org.junit.jupiter.api.Test as a test case.`
c) Use appropriate assertions to check whether the test cases from `FormerPalindromeCheck` are executed properly.
d) Create another test method that checks whether `filter` and `filter2` are producing equal results.
e) Create also a test for the class `PasswordChecker` and create some testcases accordingly.

Task 2 – Testscenario for accumulators

In this task, we are creating a test class for `Accumulator`.

1) Create a test class for `Accumulator`.
2) Create an array of accumulators in this test class, that we can use for testing.
3) Create at least a LiPo accumulator with a capacity of 1000, a NiMh accumulator with a capacity of 2000, a NiCd accumulator with a capacity of 500, a Lead accumulator with a capacity of 200 and a LiIo accumulator with a capacity of 3000 and charge them before each test case with 100.
4) After each test, make sure that all the accumulators are discharged.
5) Create a test where you charge each accumulator with 1 and check whether the charging was successful.
6) Create a test where you charge all accumulators wit 10.000 and check whether they did not overcharge.