- **Java structural testing plugins in IntelliJ IDEA,** https://www.jetbrains.com/help/idea/running-test-with-coverage.html#coverage-run-configurations:
  - Integrated Coverage Runner
  - Emma
  - JaCoCo
  - there are similar tools for different IDEs and languages.
- **EclEmma,** https://www.jacoco.org/index.html, is Eclipse plugin based on Java Code Coverage Library called JaCoCo that performs analysis of Java bytecode.
- Description of coverage counters provided by **JaCoCo** can be found in its documentation www.jacoco.org/jacoco/trunk/doc/counters.html. As you can see in it, JaCoCo and hence EclEmma provide
  - instructions coverage
  - branch coverage
  - line coverage and
  - cyclomatic complexity
- **PIT (Mutation testing) settings in IntelliJ IDEA** (after successfully running your unit tests):
  Run -> Edit -> Configurations -> Templates -> PIT Runner -> + -> PIT Runner ->
  - Name: PIT
  - Target classes: Specify the package or classes you want to test (e.g., Pachet1.*).
  - Source dir: Path to your source code directory (e.g., …/src).
  - Report dir: Use the default value.
  - Other params: Add any additional parameters you need (e.g., --outputFormats XML,HTML --targetTests Pachet2.*).
  - See the images `set_pit_intellij_1.png` and `set_pit_intellij_2.png` for reference.
  - SDK version consideration: If your project default is SDK13, ensure you set it to SDK11 for compatibility.
  - PIT works for a Java project with the structure shown in the image `structura_proiect_run_junit.png` if using JUnit4.
  - For projects using JUnit5, follow the setup instructions for Maven or Gradle:
    https://github.com/pitest/pitest-junit5-plugin
    https://www.baeldung.com/java-mutation-testing-with-pitest

- **Killing println mutants** (and more): To remove mutant println statements (and other mutations), consider using the System Rules library, https://stefanbirkner.github.io/system-rules/.
    - Download the JAR file from https://stefanbirkner.github.io/system-rules/download.html and add it to your project:
    Right-click on your project name -> Open Module Settings -> Library -> + -> select the path to the downloaded JAR file -> OK
    - See the image `add_systemrules_jar_intellij.png` for reference.