Initial Requirements – MuTest

**Initial Functional Requirements**

1. The system shall parse source code files into an Abstract Syntax Tree (AST).
2. The system shall generate code mutants by applying mutation operators to the AST.
3. The system shall execute the existing test suite against each generated mutant.
4. The system shall track and record whether each mutant was *killed* or *survived* based on test results.
5. The system shall calculate the mutation score by dividing the number of killed mutants by the total number of mutants.
6. The system shall display mutation testing results, including the mutation score and surviving mutants.