Master's thesis: 124 p., 26 fig., 25 tabl., 2 appendixes, 19 sources.

Object of research – automated testing systems.

Subject of research – methods and algorithms for generating test suites.

Purpose of the research – development of the architecture and description of the principles of automated testing and practical implementation of the system. The research reviewed approaches and methods for generating test sets and reviewed existing systems.

The results of the research:

- Analysis of existing methods for generating test sets;

- The proposed system architecture automated testing;

- The algorithm implemented as a web service.

The novelty of the work:

- created an algorithm for automated generation of test sets based on pairwise testing method and genetic algorithm.

 The practicality of the research:

-      created a system for automated testing by using the proposed method for generating test suites.

The results of this study can be implemented when automating the generation of test sets. With further research in this field, it is advisable to increase the number of algorithms to generate and improve the speed of generation.

TESTING, TEST CASE, COVERAGE ARRAY, PAIRWISE TESTING, LATIN SQUARE, GENERATION, FUZZY LOGIC, WEB INTERFACE