

## ABSTRACT

Explanatory note size – 78 pages, contains 16 illustrations, 35 tables, 25 sources, 1 appendix.

**Topicality.** Today, when developing software on projects, you can face such problems as: not using metrics, using unnecessary metrics, or spending time on changes that are made only to satisfy the values of a specific metric.

A single format for presenting metrics and where they will be stored will solve the problems described above.

**The aim of the study.** To propose a structure of presentation of information about metrics of all phases of the software life cycle and their components.

**Object of research:** software metrics.

**Subject of research:** software life cycle metrics, models, methods and tools for applying software life cycle metrics.

To achieve this goal, the following **tasks were formulated:**

- clarification of the state of research regarding the application of software metrics;
- analysis of existing solutions;
- creation of a structure of information presentation, regarding metrics of all phases of the software life cycle and their components;
- creation of an application for implementing this structure in the form of the E-catalog.

**The scientific novelty** of the results of the master's thesis lies in the fact that further development of the structure of information presentation of the metrics of all phases of the software life cycle and their components is proposed.

The practical value **of the obtained results** is done structure of metrics and the proposed architecture that can be used to create and use the E-catalogue of metrics for all phases of the software life cycle.

**Relationship with working with scientific programs, plans, topics.** Work was performed at the Department of Informatics and Software Engineering of the National Technical University of Ukraine «Kyiv Polytechnic Institute. Igor Sikorsky».

**Approbation.** The scientific provisions of the dissertation were tested at the Second International scientific-practical conference of young scientists and students "Software Engineering and Advanced Information Technologies" (SoftTech-2023) - Kyiv.

**Publications.** The scientific provisions of the dissertation published in:

- 1) Yevhenii Koshovets , Eduard Zharikov. E-CATALOGUE OF SOFTWARE METRICS FOR SOFTWARE LIFECYCLE// Proceedings of the second all-Ukrainian scientific-practical conference of young scientists and students "Software Engineering and Advanced Information Technologies" (SoftTech-2023) - Kyiv: NTUU "KPI them. Igor Sikorsky ", 8-10 May , 2023 .
- 2) Yevhenii Koshovets. SOFTWARE METRICS E-CATALOGUE // International scientific-practical Internet-conference «Information society: technological, economic and technical aspects of development (issue 78)», 9-10 June, 2022.

CATALOGUE, SOFTWARE METRICS, SOFTWARE DEVELOPMENT LIFE CYCLE