ABSTRACT

Explanatory note size – 153 pages, contains 38 illustrations, 30 tables, 11 applications, 63 references.

Topicality. Despite the active development of Low-Code/No-Code (LCNC) technologies, existing platforms are mostly focused on rapid application development in small and medium-sized business environments. At the enterprise level, their use is limited by several factors, such as insufficient scalability, performance issues, and others. This highlights the relevance of researching and improving architectural approaches that enable the use of LCNC solutions in the corporate segment.

The aim of the study. Ensuring the adoption and use of LCNC platforms by enterprise-segment organizations through the design of a software architecture that meets the requirements of the corporate environment.

The object of research. Software for creating web applications using the LCNC approach.

The subject of research. Architectural approaches, methods, and tools for ensuring the scalability, performance, and extensibility of enterprise-level LCNC platforms.

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

- analyze modern architectural approaches used in leading LCNC platforms;
- identify the systemic shortcomings and limitations of existing LCNC platforms;
- define the requirements for an improved LCNC platform architecture;
- develop the architecture and describe its main components;
- justify the chosen technological solutions;
- conduct testing of the proposed architecture’s prototype.

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 «Igor Sikorsky Kyiv Polytechnic Institute».

Approbation. The scientific provisions of the dissertation were tested at the IX International Scientific and Practical Conference of Young Scientists and Students «Software Engineering and Advanced Information Technologies (SoftTech-2025)».

Publications. The scientific provisions of the dissertation published in:

– M. Lytvynenko, P. Rodionov. Software architecture for developing web applications using a No-Code/Low-Code approach. Materials of the IX International Scientific and Practical Conference of Young Scientists and Students «Software Engineering and Advanced Information Technologies (SoftTech-2025)». Department of Informatics and Software Engineering Section. November 26-28, 2025. Kyiv.

Keywords: LCNC-platform, low-code, no-code, software architecture.