ABSTRACT

Explanatory note size – 107 pages, contains 28 illustrations, 23 tables, 4 applications, 22 references.

Topicality. Examines the problem in the field of reactive networking, shows the main features of existing solutions for MacOS and iOS platforms, their advantages and disadvantages. The need to improve the methods of working with the network and eliminate existing shortcomings is identified.

The aim of the study. The main target is to provide developers with a convenient tool for working with network requests, asynchronous operations, and data flow management.

The object of research: a multi-platform tool for working with the network.

The subject of research: methods and approaches for reactive application operation on iOS and MacOS platforms.

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

– analysis of existing solutions;

– building the structure of the tool;

– software development;

– deployment of the library.

The scientific novelty of the results of the master's dissertation is that the reactive approach to ensuring the adaptability and efficiency of applications when interacting with the network has been further developed.

The practical value of the obtained results is that developers of mobile and desktop applications on iOS and MacOS platforms are provided with a convenient tool for working with network requests, asynchronous operations, and data flow management.

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 fifth Scientific and Practical Conference "SoftTech-2023" and published in the conference proceedings.

Keywords: SWIFT, NETWORKING, MACOS, IOS, REACTIVE PROGRAMMING.