## FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION ST. PETERSBURG STATE UNIVERSITY

feedback

the head of the final qualifying work

IV - year student Anastasia Andreevna Khandeshina

Direction 09.03.03 "Applied informatics"

Main educational program "Applied informatics in the field of arts and humanities" Supervisor: Candidate of Physical and Mathematical Sciences, Associate Professor Pavel Petrovich Shcherbakov

The topic of the final qualifying work is "Development of educational applications «Interactive problems in mathematics»".

The final qualifying work of Anastasia Andreevna Khandeshina is devoted to the creation of a mobile application for checking the knowledge of mathematics in elementary school students. The purpose of the work was to demonstrate the entire production cycle of a multimedia educational application.

The main stages of work: Anastasia Andreevna carried out a lot of preparatory work to implement the tasks set. She analyzed the main levels of educational goals that students need to pass in order to fully assimilate the information. Conducted the selection of test tasks for the application. In accordance with the chosen style of combining educational and gaming technologies, I conducted a search and analysis of analogues. On this basis, the student developed the structure of the application, chose stylistic solutions for the exterior design. The Unity3D platform was chosen as the software development environment, which allows the development of a multi-platform application. Desktop systems running the Windows operating system and mobile devices (tablets and smartphones) running the Android operating system were selected as target platforms.

A 2D interface in the "pixel art" style was chosen as the application interface. In accordance with the style requirements, 9 types of screens were developed for various stages of the educational application, graphic assets, audio requirements were created, fonts were selected in accordance with the selected visual and audio solutions.

Using scripts written in C#, the basic mechanics of the application were implemented. The developed application was ported to target platforms, resulting in an executable application for the Windows platform and an apk file for installation on Android devices. The application was deployed on several real devices with different characteristics to test the interface. All stages of development are described in detail by Anastasia in her graduation paper in 3 chapters. Evaluation: In the process of work, Anastasia Andreevna Khandeshina proved herself as an established professional who is able to solve complex complex technical and creative tasks. She will be able to successfully apply the acquired knowledge and skills in various fields. The final work speaks of Anastasia's high professional level and creative potential.

I believe that the work of Anastasia Andreevna Khandeshina fully meets all the requirements for final qualifying works and deserves/high praise.

\_\_\_\_\_ ( Shcherbakov P.P.) Signature

\_\_27\_\_\_" \_\_\_ May\_\_\_\_ 2022.