BELARUSSIAN STATE UNIVERSITY

MECHANICS AND MATHENATICS FACULTY

Web technologies and computer simulation department

Annotation to the diploma work

APPLICATION OF UNITY-3D DEVELOPMENT ENVIRONMENT FOR CREATING MOBILE RPG FOR ANDROID PLATFORM

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Diploma contains 60 pages, 13 images, 8 sources, one application.

Keywords: UNITY 3D, RPG, PROGRAMMING LANGUAGE C#, SCRIPT, COMPONENT, BLENDER, ANDROID, CROSSPLATFORM, LOW POLY, ANIMATION, UI.

The aim of this thesis is to develop a uniform system of interaction of objects in the virtual space via computer game using the C # programming language and the Unity 3D game engine. As such objects, game models of LowPoly are considered, which act as interaction objects in the test environment of a computer game.

To achieve the purpose, the subject area on the basis of games, written for Unity3D, has been studied. The plan of realization, which can be used to build and perform the model, has been worked out.

To achieve this aim techniques of development of games on Unity engine were studied and used.

In the thesis work obtained the following results:

1. Described the development process of 3D RPG using cross-platform development environment Unity3D.
2. 3D RPG was created.
3. Considered a number of popular RPGs and games of other genres, the analysis of which influenced the creation of the game described below.

The novelty of the results lies in the variety of tools and ways to implement better-quality games on Unity with extensive commercial opportunities and monetization techniques in comparison with previous generations of games. Also, the relevance of game development is their social significance.

Thesis is both theoretical and practical. Its results can be used when scaling and monetizing games for commercial purposes, as well as its model can be used both for its own developments, and later by third-party developers.

All the results of the thesis are proved in accordance with the current rules and tools for creating a RPG. The validity and accuracy of the results is due to the official documentation of Unity, Microsoft and Blender.

Thesis was done by the author herself.