MUNI
FI

Faculty of Informatics

Reader's Bachelor Thesis Assessment Report

Title:	Graphical user interface for Age
Author:	Filip Vincze
Description:	Age is an academic game engine developed in Visitlab/HCI laboratory. Its purpose is to provide a software basis and playground for game development courses. The goal of the thesis is to design and implement a graphical user interface (GUI) to Age. The student will study GUI systems in various game engines, like Godot, Unreal, Unity. Based on the investigation, an approach for Age will be designed and implemented. The goal is to create a lightweight, flexible and easy-to-use GUI system, rather than a complex one with lots of specialized widgets. The functionality and effectiveness of the implementation should be evaluated on various GUI scenarios (widget compositions). The text of the thesis must describe GUI systems in researched game engines, functionality of the designed and implemented GUI system in Age and also results from the performance evaluation.
Supervisor:	Mgr. Marek Trtík, Ph.D.
Reader:	RNDr. Jan Byška, Ph.D.

The aim of this thesis is to implement a GUI module into the Academic Game Engine (AGE). The thesis shows a significant understanding of the topic. However, it would benefit from some wordsmithing. The text contains awkward phrasing, missing words, typos, and grammatical errors hindering readability. There are also typographical issues, such as references overflowing onto single lines. While the thesis is divided into several generally well-structured chapters, some sections could benefit from better focus. For example, the second chapter, which details the Academic Game Engine, is interesting but overly detailed for the scope of this thesis.

References are another weak point. The sources of images in the first chapter depicting exemplary interfaces in various games are unclear—if these images are taken from external sources, proper citation is essential; otherwise, if they are screenshots made by the author, at least the game's name should be mentioned in the captions for context. Furthermore, most references in the thesis lead to online documentation, which is understandable given the practical nature of the work. However, the theoretical concepts discussed in the first section, such as GUI design, could be strengthened by referencing relevant scientific literature.

The practical implementation fulfills the assignment requirements, and the amount of code delivered is sufficient. Overall, the code is well-organized, although all UI elements are implemented in a single large file, which could be improved. That said, the design also promotes easy extensibility, which I appreciate. However, the source code is only sparsely commented, which is unfortunate, especially considering that the codebase is intended to be used by other students in the future.

I also encountered some issues during compilation. Specifically, a few header includes are missing, and all the applications crash directly after compilation with VS Code, presumably due to misconfiguration. I managed to run the tutorial application using Visual Studio and got Font Tool work when I realized it requires at least some parameters to run. Despite all my attempts, I could not execute the benchmark application.

When the tutorial application did run, it performed pretty well. The only minor issues I noticed were that the "Hello" text is cut off on the right side. Futhermore, the sliders in the options extend slightly beyond their bounds (the boundaries appear to be set in the middle of the handle). Finally, the "game" does not fully restart after returning back to the menu, despite prompting me to insert the name again. While these are more inconveniences than major problems, addressing them would enhance the overall user experience.

Considering the overall achieved outcome, I propose evaluating the work with a grade of passed.

In Brno 23. 1. 2025

.....
RNDr. Jan Byška, Ph.D.