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WYDZIAŁ INFORMATYKI

PRACA DYPLOMOWA INŻYNIERSKA

TEMAT: IMPLEMENTACJA PIKSELOWEJ GRY 2D Z WYKORZYSTANIEM BIBLIOTEKI SDL2
IMPLEMENTATION OF A 2D PIXEL GAME USING THE SLD2 LIBRARY

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SUMMARY

The engineering thesis titled "Implementation of a 2D Pixel Game using the SDL2 Library" focuses on the development of an immersive and visually appealing video game using the SDL2 library in conjunction with custom graphics. The project highlights the practical application of software engineering principles, showcasing the creation of a captivating 2D pixel game with a personal touch.

The thesis begins with an introduction that outlines the motivation behind the project, emphasizing the desire to create a unique gaming experience through the integration of custom graphics. The SDL2 library, renowned for its versatility and cross-platform compatibility, serves as the foundation for the game's development. By leveraging the library's capabilities, the project aims to deliver an engaging visual experience that captivates players.

The implementation section provides an in-depth description of the technical aspects involved in creating the game. This encompasses the setup of the development environment, configuration of the SDL2 library, and the design and implementation of various game mechanics, user interface elements, and custom graphics. The thesis highlights the significance of personalized graphics, underscoring the effort and creativity invested in developing visually striking elements that enhance the overall aesthetic appeal of the game.

Throughout the development process, the thesis addresses challenges encountered and the corresponding solutions employed. It highlights the iterative nature of graphic design, discussing techniques for optimizing performance and refining graphical elements. The thesis showcases the author's creative abilities by emphasizing the contribution of personally created graphics, demonstrating the fusion of technical skills and artistic vision in the game's visual presentation.

To evaluate the implementation, the thesis employs various metrics and user feedback analysis. This assessment helps identify areas of improvement and provides insights into the effectiveness of the custom graphics in enhancing the gameplay experience. By incorporating user feedback and conducting playtesting, the thesis

demonstrates a commitment to refining the game's graphics and ensuring player satisfaction.

In conclusion, the thesis successfully demonstrates the implementation of a 2D pixel game using the SDL2 library while showcasing the author's talent in creating custom graphics. By leveraging software engineering principles and investing in personalized visual elements, the project achieves its objective of providing an immersive and visually captivating gaming experience. The thesis serves as a testament to the fusion of technical expertise and artistic creativity, offering valuable insights for future game development endeavors where unique graphics play a significant role.

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