TECHNICAL UNIVERSITY OF TALLINN

Faculty of Engineering

Department of Computer Systems

IAX0584 Programming II

C++

Homework 3

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Author: XXXXXx

Group: MVEB21

Supervisor: Vladimir Viies

Author’s declaration of originality

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication. All works and major viewpoints of the other authors, data from other sources of literature and elsewhere used for writing this paper have been referenced.

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Task In Homework 3, the re-implementation of either Homework 1 or Homework 2 is required, with a specific focus on utilizing C++ and object-oriented programming (OOP) principles. Instead of a procedural approach, the solution should be structured around the design and implementation of C++ classes. The key objective is to demonstrate the ability to effectively apply C++ class concepts (including encapsulation, inheritance, and polymorphism) and OOP design techniques to structure the solution. I've chosen to do Homework 2 for this task.

Task description:

Picture 1. Task

Code in C++(with DMA)

AI contribution

The C++ source code was produced through the application of an AI-powered code generation tool. Input to the AI consisted of a comprehensive task description and a preliminary version of the code written in the C programming language. I wrote as much as I knew the code into C++ and then gave all the information I had to AI. The AI subsequently processed this information to create the final C++ implementation, adhering to the defined objectives.