
Student Name	David P. Callanan	Student Number	21444104
Supervisor	Dr. Phil Maguire	ECTS Credits	5
Project Title	Studying link-time optimizations in programming language development to facilitate the continuum of static and dynamic modules.		

1 Project Objectives

The goal of this project is to develop a proof-of-concept programming language that facilitates bespoke optimization techniques via novel language constructs. The specific objective is to research the continuum of static and dynamic modules in low-level software development. A module system would be designed to promote dispatch flexibility by abstracting away the underlying dispatch mechanism, enabling aggressive link-time optimizations when circumstances allow. The development of a prototype compiler would demonstrate the efficacy of the proposed solution.

2 Description of Work Completed

2.1 Evidence of Work Completed

2.2 Literature Review

2.3 Use of GenAI and Tools

3 Future Work

References

[1] Author, Title, Venue/Publisher, Year.

A Appendix: Source Code

B Appendix: LLM Prompts