Katholieke
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**Department of
Computer Science**

PROJECT
Advanced Programming Languages for A.I. (H02A8a)

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Introduction

In this report we will discuss the different approaches we tried to eventually come to the solutions we have now for Sudoku and Hashiwokakero. The solutions we got are the result of a lot of work and a lot of back tracking on our previously done work. We often came in situations where we got stuck because of the limitations of the Eclipse and CHR systems but we also often had to back track on our work since we were often feeling that we were doing things in a non declarative way. We often tried to do things in a procedural way when we first started with Sudoku which means we lost quite some time here since we often had to rethink how we could write things in a more declarative way. For the Hashiwokakero part of the project things went a bit better but we lost quite some time here with the fact that ECLiPSe doesn't support constraints in conditionals. We will discuss this further in section 2. The fact that we often had to backtrack on our work was according to us due to the fact that we are still novices with prolog since this is the first time we used this programming language.

In the solutions we will discuss we decided to only use ECLiPSe and CHR. This was partially due to the fact that when we started this assignment we still hadn't seen Jess in class. Once we did have the class about Jess we found that since we were still novices at declarative programming languages, it would be a good exercise to continue using the more declarative systems to gain more experience with them.

Chapter 1

Part 1: Sudoku

Chapter 2

Part 2: Hashiwokakero

2.1 ECLiPSe

2.2 CHR

Chapter 3

Conclusion

Chapter 4

Appendix