University of Southampton

COMP2212

Programming Language Concepts

# The *HERB* Language User Manual

A Domain Specific Language to solve any conjunctive query.

*Authors:*

*James Towns*

*Elliott Power*

*Module Lead:*

*Dr. Pawel Sobocinski*

April 2018

# Contents

[The *HERB* Language User Manual 1](#_Toc512699098)

[Contents 2](#_Toc512699099)

[1 Problem Domain 3](#_Toc512699100)

# Problem Domain

This language’s (PRIMARY???) function is to solve conjunctive queries – first order logic functions that use only relation symbols, equality, conjunction and existential quantifications. This is a part of the set of problems that can be called on queries on relational databases.

# Data Types

The queries in HERB follow a format that is like relational algebra and adds some syntax sugar over the top to allow someone with a mathematical background to easily pick up the language. Therefore, each program is treated as a query that is separate into what is left of the marker, and right of the marker. Therefore: *x1, x2, x3 |- A(x1,x2) ^ B(x2,x3)* is a valid input.