

MOLLY

by

Richard Drake

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

Masters of Science

in

Faculty of Science

Computer Science

University of Ontario Institute of Technology

Supervisor: Dr. Ken Q. Pu

September 2012

Copyright © Richard Drake 2012

Abstract

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Contents

I	Introduction	I
1.1	Data Representation	I
1.1.1	Value	I
1.1.2	Entity	I
1.1.3	Entity Group	2
1.2	Ford-Fulkerson	2

List of Figures

1.1	The structure of an entity	I
-----	--------------------------------------	---

List of Tables

Chapter 1

Introduction

1.1 Data Representation

The data from the database is represented in various data structures. There are separate representations for each type of data: values, entities, and entity groups.

1.1.1 Value

Definition 1. A **Value** represents a single piece of information. To avoid repetition, each value is unique. That is, $\exists! v \in V$, where v is a value in the set V of all values.

1.1.2 Entity

Definition 2. An **Entity** is a collection of attributes, a_n , each mapped to a single value, v_n . An entity also includes additional information such as a unique identifier.

id	$T_n v_{id}$
a_1	v_1
a_2	v_2
\vdots	\vdots
a_n	v_n

Figure 1.1: The structure of an entity

Entities are analogous to rows in a database table. Thus, the unique identifier is generated based on the table name, T_n , as well as unique key in the table, v_{id} . The unique key identifies the row, and the table name identifies the table. Together they uniquely identify the entity within the entire database.

$\exists! e_{id} \in E$, where E is the set of all entities in a data set.

1.1.3 Entity Group

Definition 3. An Entity Group

1.2 Ford-Fulkerson

Ensure: $1 = 1$
