

University of Liverpool

Computer Science with a Year in Industry BSc (Hons) ${\rm G403}$

Year In Industry Dissertation

Author: N Aishah B M Senin (200912462)

Project advisor:
Dr. Prudence Wong

Abstract

This project is being created for the University of Liverpool under the supervision of Dr. Prudence Wong and Dr. Igor Popatov with the aim of creating an application that serves an educational purpose to the students in the Computer Science department. The intentions of this application is to display the algorithmic paradigms with the use of animations. This program is easily accessible through the use of any up-to-date Internet browsers.

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Introduction

- 1.1 Project Aims
- 1.2 Project Objectives
- 1.3 Project Challenges
- 1.4 Solutions
- 1.5 Effectiveness and Success of the Project

Design

2.1	Database	Design

- 2.1.1 Conceptual Design
- 2.1.2 Logical Design
- 2.1.3 Physical Design
- 2.2 Data Dictionary
- 2.3 Algorithm Code Design
- 2.4 Code Structure Design
- 2.4.1 UML Class Diagram
- 2.4.2 Sequence Diagram
- 2.5 Storyboarding
- 2.5.1 Selecting an algorithm to animate
- 2.6 Front-End Interface Design
- 2.6.1 Main page
- 2.6.2 Form page
- 2.6.3 Animation page

Realisation

- 3.1 Technologies used
- 3.1.1 The MVC Architecture
- 3.1.2 Database Connectivity Technology and the use of Models
- 3.2 Component Implementation
- 3.2.1 Database Connection Manager
- 3.2.2 Code generation from SQL to LINQ

Evaluation

- 4.1 Criticisms on the animations
- 4.2 Project Weakness
- 4.3 Stakeholder Feedback