Dept of Computer Science and Information Systems

Birkbeck
UNIVERSITY OF LONDON

BSc Final Year Project Form (2015/2016)

1. Proposal

The student should complete parts 1(a), 1(b) and 1(c) below, and then agree the maximum pocket values with the supervisor and put these in part 2(a) below. An electronic version of this form should be uploaded to the Final Year Project page on Moodle no later than **Monday 2nd November 2015**.

(a) Student details

Name:	Module *delete as appropriate*
	Project Information Systems and Management Type 4 (BUCI027S6)
Email:	**Project BSc Computing (COIY039S6)**

(b) Project details

Title: Puzzle solver : the complexity and effectiveness of algorithms
Objectives: To analyze the complexity and effectiveness of algorithms employed to solve decision problems
Description: While simple brute force approach can be used to solve simple problems, many algorithms are invented for much more complex problems where the best solution cannot be found with brute force approach in executable time. The project analyzes those different algorithms, which one is the best for different situation.
Method: The project is going to develop several applications for solving different puzzles. Through experimenting the puzzles of different rules and difficulty, it will compare the methods, decide which one is best for certain requirement, and above all, discuss how the effectiveness can be compared.

Title: Puzzle solver : the complexity and effectiveness of algorithms

Work plan:

1.Chooses puzzles to solve (preferably 3)

2.Picks a puzzle

3.Analizes the rule of the puzzle

4.Implements GUI

5.Designs a backtracking algorithm (refinement of brute force) for the puzzle

6.Implements the algorithm

7.Implements a function to measure the effectiveness

8.Judges if current algorithm is effective enough. If so, picks next puzzle and go through the process from 3. If the algorithm is not effective, looks for better algorithm and go through the process from 6.

9.Write a report of the project, summarizing the different choices for different situations.

College equipment required:

(b) Student feedback