BSE16071 GD2S03 Advanced Software Engineering & Programming for Games	Summative 1	Issue Date: 12th March 2018
		Submission Date: 9th April 2018 Submission Time: 9:00am
Submission Filename YYYY-MM-DD – GD2S03 – Summative– Student Name.zip *Student_name-Summative*		

This summative is composed of a programming exercise to understand widely used language in Apple game development - Swift. It contributes 40% towards the final mark of GD2S03 paper. The summative is explained below.

Introduction

Create a project/program that will generate a simple Sudoku puzzle solver.

Process

The program is to ask the user to input the numbers as follows:

8			4		6			7
						4		
	1					6	5	
5		9		3		7	8	
				7				
	4	8		2		1		3
	5	2					9	
		1						
3			9		2			5

The input to the program can be specified in a line by line form, for example as,

First Row: 800406007

Second Row: 509030780 and son on.

(Take '0' (Zero) as input for empty places)

The AI is to be purely written in Swift, and it is to solve any given Sudoku puzzle.

Strategy

A Sudoku puzzle can be very simply solved using the following strategies:

1. Each vertical line must contain digits from 1 to 9
2. Each horizontal line must contain digits from 1 to 9
3. Each block of 3 x 3 sub squares (as indicated by the bold edges) must contain digits 1 to 9

4. No line or sub square is to have two identical digits.

Requirements

1. AI is to be purely written in Swift.
2. The program must check if it makes a duplicate entry
3. Adherence to MDS Coding Standards is a must!

Assessment Criteria

Grade D

1. The application allows the entry of the Sudoku puzzle but it does not solve it or solves it wrongly.

Grade C, as per grade D

2. The application solves the given Sudoku puzzle.

Grade B, as per grade C plus

3. The application is able to take in user input to set the starting numbers in the Sudoku puzzle and then solve it.

Grade A, as per grade B plus

4. The application is able to randomly generate a correct set of numbers to begin with and solve the puzzle for it.

Remarks