1

Exercise : cell array

Suppose you want to create a 2×2 cell array A, whose cells contain the location, the date, the air temperature (measured at 8 A.M., 12 noon, and 5 P.M.), and the water temperatures measured at the same time in three different points in a pond. The cell array looks like the following.

Walden Pond	June 13, 1997
[60 72 65]	$\begin{bmatrix} 55 & 57 & 56 \\ 54 & 56 & 55 \\ 52 & 55 & 53 \end{bmatrix}$

2

Exercise: structure

Ex 1.

```
% change the value of the structure using field name
clear student      % clear student
student(1) = struct('name', 'Banny', 'scores', [85,80,92,78]);
student(2) = struct('name', 'Joey', 'scores', [80,85,90,88]);
student(3) = struct('name', 'Betty', 'scores', [88,82,90,80]);
```

(a) get the values of the scores of every students

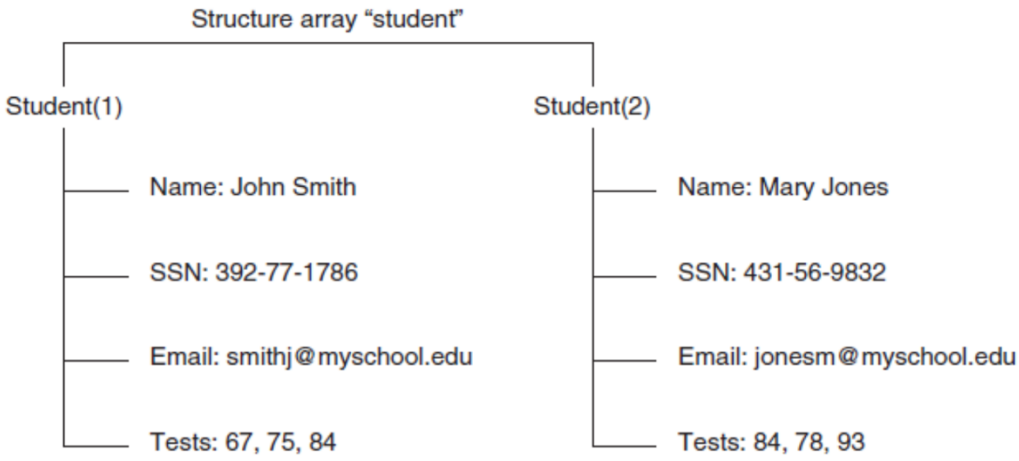
(b) Calculate the average score of each student by

Average score=0.2*score1+0.2*score2+0.3*score3+0.3*score4

(c) Add a field name ‘avg’ for the Average score of the student.

3

EX 2: Create a structure “student ” with the field name and the data as follows:



4

Ex3:

Create a structure array that contains the following information elds concerning the road bridges in a town: bridge location, maximum load (tons), year built, year due for maintenance. Then enter the following data into the array:

Location	Max. load	Year built	Due for maintenance
Smith St.	80	1928	2011
Hope Ave.	90	1950	2013
Clark St.	85	1933	2012
North Rd.	100	1960	2012

Edit the structure array created in Problem 48 to change the maintenance data for the Clark St. bridge from 2012 to 2018.

Add the following bridge to the structure array created in Problem 48.

Location	Max. load	Year built	Due for maintenance
Shore Rd.	85	1997	2014

Excel_test_score1 HW

順序	學號	姓名	平時考核	期中考試	期末考試
1	M0919350	蔡樺	90	80	85
2	M0919750	詹博	90	80	85
3	M0930093	范齡	88	78	80
4	M1077660	曾蒙	90	88	80
5	M1086811	柯偉	70	78	0
6	M1103180	邱鴻	80	90	83
7	M1105135	蔡葦	90	85	90
8	M1105415	林成	90	90	83
9	M1107451	汪右	90	90	90
10	M1109717	黃冠	75	88	80
11	M1110310	吳紫	70	70	80
12	M1110337	王惟	90	90	90
13	M1116795	徐帆	95	80	95
14	M1118026	王均	75	88	80
15	M1118176	林辰	82	75	85
16	M1118306	蘇承	85	80	80
17	M1118797	劉芫	75	80	80
18	M1129494	曹峻	85	88	80
19	M1129685	蔣仲	75	80	80
29	**Average score**	**-**	**Avg**	**Avg**	**Avg**

1) Read Excel file with MATLAB in structure array
2) Calculate the average scores with mean function
3) Export table from MATLAB to excel