**School of Digital Media & Infocomm Technology (DMIT)**

**ST2111 Mobile Application Development I**

**Practical 8**

**Arrays**

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| Objectives:  After completing this lab, you should be able to:   * Write programs which uses arrays |

**Exercise 1: Write Programs Using Arrays**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-1** folder
3. Write a JavaScript program to test whether two arrays are strictly identical.

Note: Two arrays *list1* and *list2* are strictly identical if they have the same length and *list1[i]* is equal to *list2[i]* for each *i*.

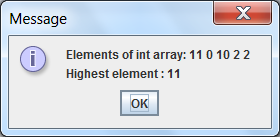
**Exercise 2: Write Functions which accepts Arrays as parameters**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-2** folder
3. Modify Exercise 1 to use a function. Create a function called **checkEqual** which accepts two array arguments.
4. The function is to return true if all elements are equal and false if at least on element is not equal.

**Exercise 3:**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-3** folder
3. Write a function called **reverseArray** which accepts one array argument. The function reverses the elements of an array so that the last element becomes the first, the second from the last becomes the second and so forth

**Exercise 4:**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-4** folder
3. Write a program which declare an array named ***intArray*** and initialize the array with integer values 11,0,10,2,2. Use a **for** loop to find the highest value stored in the array and display the results as shown:

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**Exercise 5:**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-5** folder
3. Modify Exercise 4 to do the following the following:
   1. Let the user input 5 integers into an array
   2. Print all even numbers in the array
   3. Print the sum of all values in the array
   4. Print the total number of even numbers in the array

**Exercise 6:**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-6** folder
3. Write a JavaScript function which accepts two parameters, an array **arr** and a parameter **n**. Parameter **n** will return the first **n** elements of the array. Hint: use the **slice** function.

document.write(first([7, 9, 0, -2],3));

document.write(first([7, 9, 0, -2],6));

document.write(first([7, 9, 0, -2],-3));

*Expected Output* :

[7, 9, 0]

[7, 9, 0, -2]

[]

**Exercise 7:**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-7** folder
3. Write a JavaScript program which accept a number as input and insert dashes (-) between each two even numbers.

For example:

Input: 025468

Output: 0-254-6-8.

**Exercise 8 (Optional):**

1. Create a copy of the **practical1-1** in the same **MAD1** folder
2. Rename the copied folder as **practical8-8** folder
3. Write a JavaScript program which prints the elements of the following array.
4. Note : Use nested for loops.

Sample array : var a = [[1, 2, 1, 24], [8, 11, 9, 4], [7, 0, 7, 27], [7, 4, 28, 14], [3, 10, 26, 7]];

*Sample Output* :

"row 0"

" 1"

" 2"

" 1"

" 24"

"row 1"

" 8"

" 11"

" 9"

" 4"

"row 2"

" 7"

" 0"

" 7"

" 27"

"row 3"

" 7"

" 4"

" 28"

" 14"

"row 4"

" 3"

" 10"

" 26"

" 7"

**Exercise 9: Run Exercises in the Android Simulator**

You may run your exercises using the Phonegap Android Simulator to view the output. For example, if you wish to test out **practical7-1**, do the following:

1. From the [Start screen,](http://www.computerhope.com/jargon/w/windows8.htm) click **Command Prompt** to open the Windows console.
2. Navigate to **MAD1** folder. (Note: If your MAD1 folder is in **c: drive**, type **cd\** to bring you to the root directory first, then type **cd mad1** to go to MAD1 folder. If your MAD1 folder is in **d: drive**, type **d:** to change to d: drive first, then type **cd mad1** to go to MAD1 folder.**)**
3. Create the new app by typing **phonegap create practical8-1app**and press enter.
4. Open a text editor and open the file located in **mad1\practical8-1app\www\index.html**.
5. Replace the text with the code in **Listing D** below.
6. Copy **script.js** from **practical8-1** to the **www** directory.
7. Type **phonegap run android**.
8. Your JavaScript program is run in the Android Simulator.

**Listing A. index.html**