



**CHIANG MAI UNIVERSITY**  
**Bachelor of Science (Software Engineering)**  
**College of Arts, Media and Technology**  
**1<sup>st</sup> Semester / Academic Year 2019**  
**953103 PROGRAMMING LOGICAL THINKING**

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Lab Assignment 10 : Array I

Name ..... Student ID ..... Section.....

**Objectives:**

- 1) The student understands the concept of array.
- 2) The student can perform operations on array (creation, initialization, access and assignment).

**Basic Operation**

1. Create a program with a single button and create an array with the following value

Value	10.1	13.2	9.5	18.7	20.0
Index	1	2	3	4	5

When a user clicks at the button, the program display a notifier “The number 2 is” following by the value at index 2.

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2. Based on the array from problem 1), create a program with a single button and a text box. The text box is intended for the position of the array and the button is named as “Retrieve”. When a user clicks at the button, the program displays a notifier “The number is” following by the value that user provides. If the input is not in the scope of the array, the program will display “Sorry, the input is not correct.”

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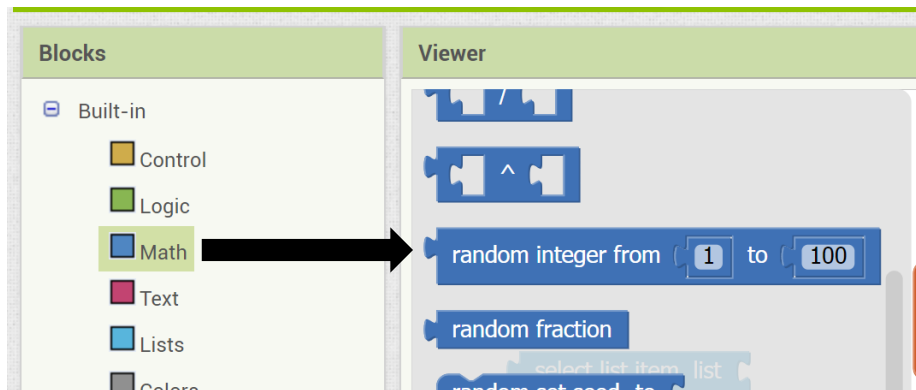
3. Based on the program from problem 2), add another button and a new text box. The new text box is for the new value. The new button is named as “Replace”. When a user clicks at the button, the program replaces the value at the given position with the new value from text box 2. If the input is not in the scope of the array, the program will display “Sorry, the input is not correct.”

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**Random method**

One of the common tool of the programmer is the random number. The random number is used to create a variety of output. Most of the programming language is already equipped with a pre-defined operation to generate random number. AppInventor provides a method to determine the

random between 2 given integer number as follows. You need to input the range of number (the starting value and the ending value).



You can try the following block for further understanding. Click the button1 for multiple times to learn more.



#### Problem Set:

4. Create a program with a single button and create an array of size 10. The button is named as "Generate Random Numbers". When a user clicks at the button, the program generates 10 random numbers between 500 and 1000. Then, the program assigns the random number to the array.

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5. Based on the program from problem 4), create a new button named "View All Data". When a user clicks at the button, the program displays a notifier with all the value in the array separating by a space.

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6. Based on the program from problem 5), create a new button named "View Summary Data". When a user clicks at the button, the program displays a notifier with the following information: 1) the maximum value in the array, 2) the minimum value in the array and 3) the average number of the array.

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7. Based on the program from problem 6), create a new button named "Check" and a text box. When a user clicks at the button, the program displays a notifier indicating the number of array's element that is larger than the input number.

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