CHIANG MAI UNIVERSITY
Bachelor of Science (Software Engineering)
College of Arts, Media and Technology
1st Semester / Academic Year 2019
SE 103 PROGRAMMING LOGICAL THINKING

Lab Assignment 05 : Data Type and If-Statement

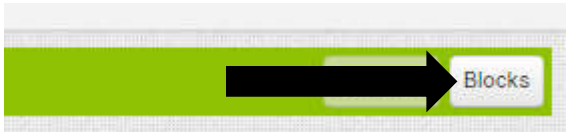
Name ..... Student ID ..... Section.....

Objectives:

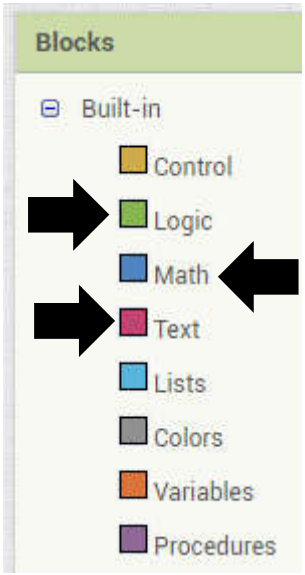
1) The student can use the data type and its operation.
2) The student can if-statement in AppInventor.

Data Type

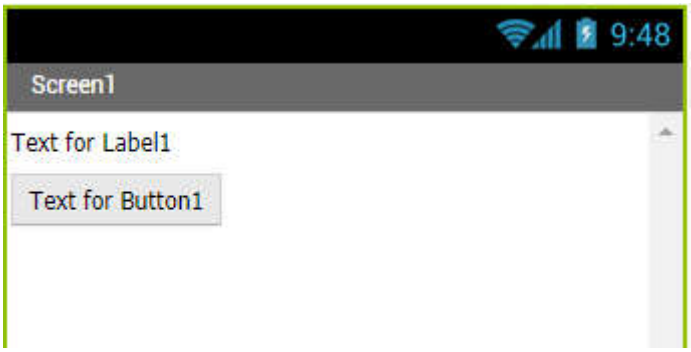
In AppInventer, there are 3 data types which are Math, Text and Logic. The Math combines the decimal number and the integer number together. The Text are string and the Logic are true and false. You can access the value in the Blocks View.



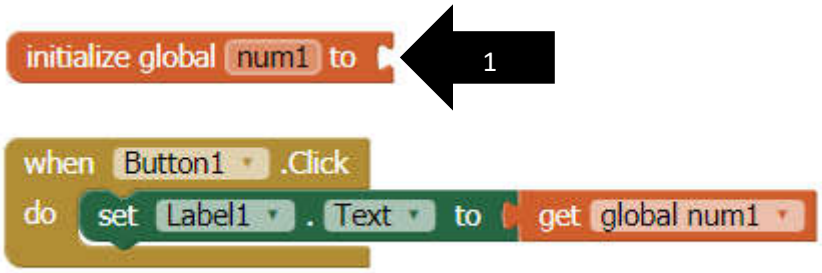
The " **value** " (not the variable) are listed as follows.



1. You have to create the screen as follows including 1 label and 1 button.

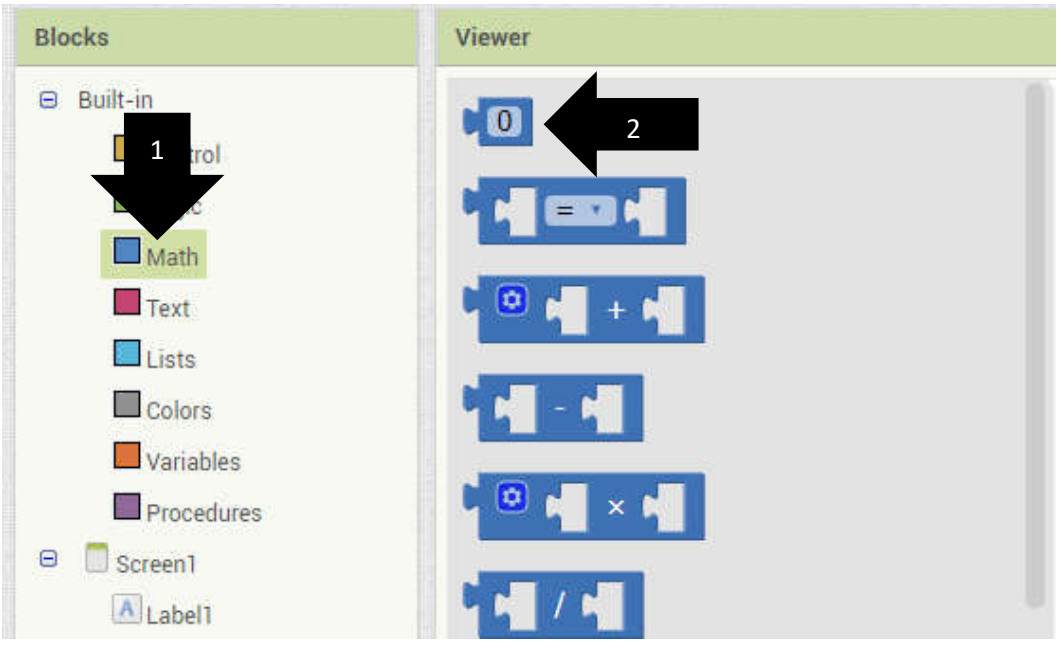


2. Create the blocks as follows.

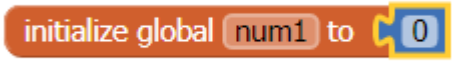


Remark: Look at the black arrow (1). The block is empty.

3. Go to "Built-in" (1) and drag the single math value (2) to the block view.

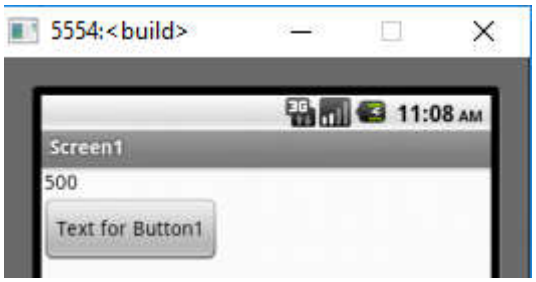


Attach the single value to the initialization of num1.



4. Assign the value 500 to replace the value 0.

5. Execute the program. The result of the program should be like the following.



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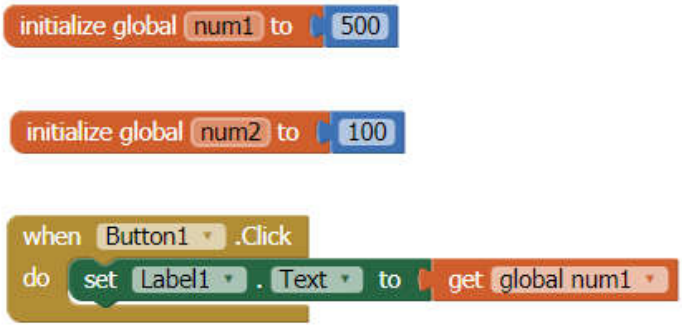
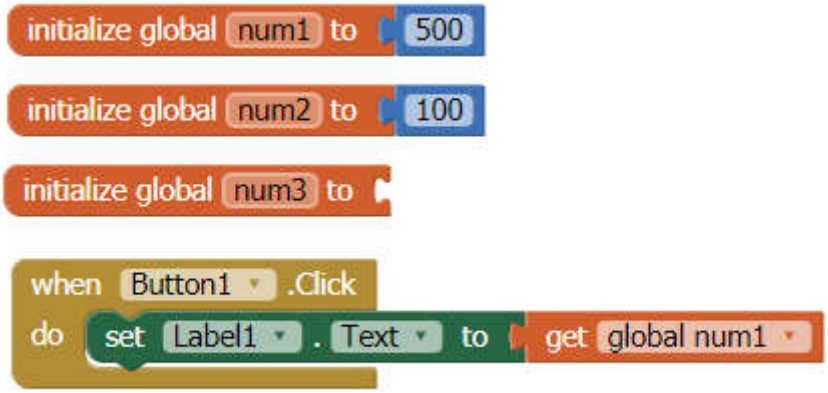
Arithmetic Expression

In this tutorial, you will learn how to use the arithmetic expression to calculate the value.

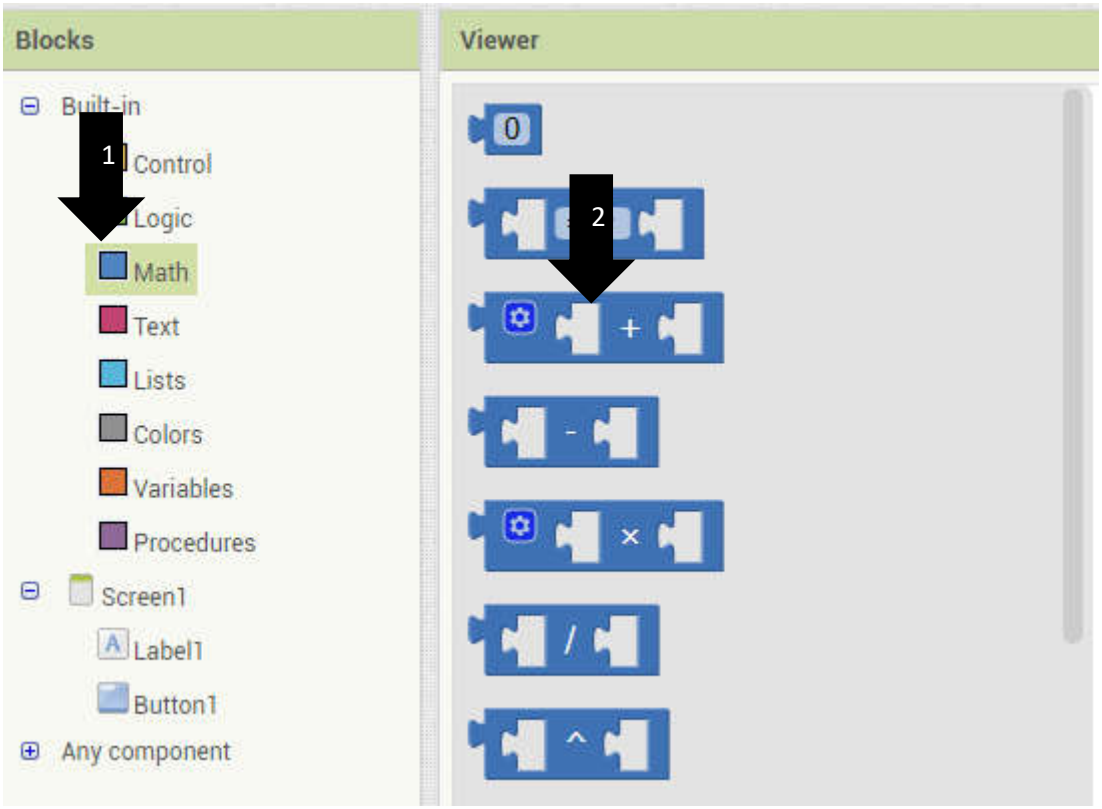
1. Use the interface from the previous tutorial and create the block as follows



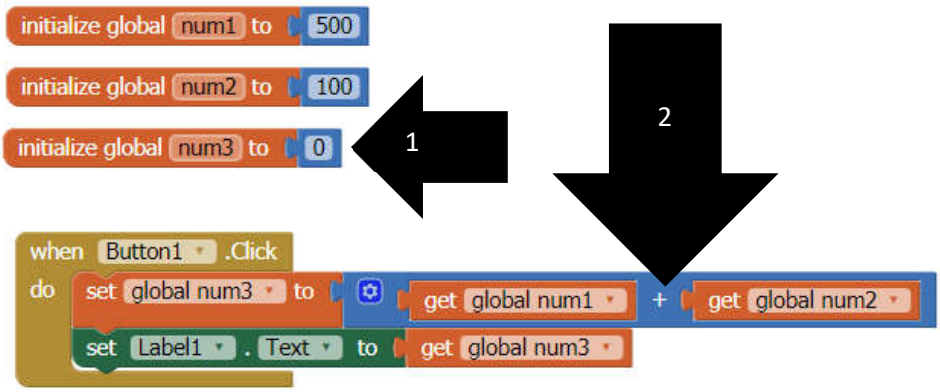
2. Create a new variable named num3.



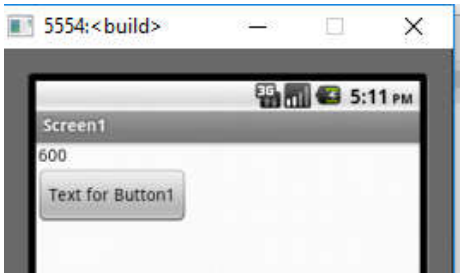
3. Go to "Built-in" menu and click at "Math" (1). Drag the addition operation (2) from the panel. The addition is one the allowable operation. There are many operations that you can use.



4. Assign the initial value of num3 to be 0 (1). Then, perform the addition on num1 and num2 and assign the result to num3 (2).



5. The result is follows.



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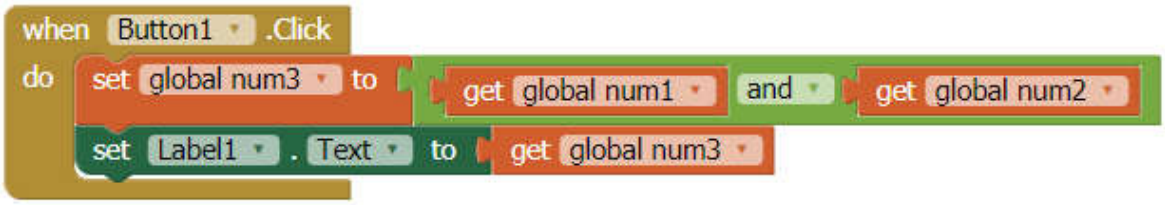
Boolean Expression

Repeat the same step. This time use the Boolean value and its operations.

1. Use the interface from the previous tutorial and create the variable declaration as follows. The Boolean value can be get from "Built-in" menu and click at "Logic". Notice the differences in color.

2. Create the blocks as follows. This set of block will perform the "and" operation on num1 and num2 and assign the result value to num3.



3. Display the result to the TA.

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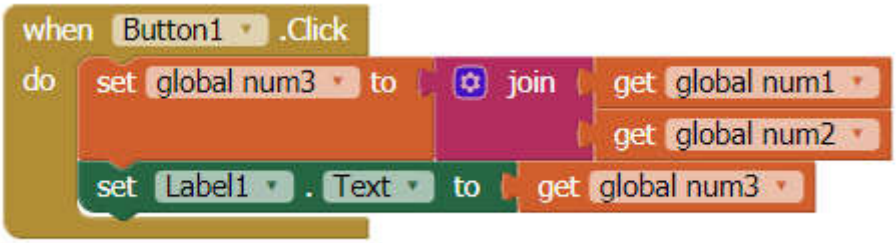
String Expression

Repeat the same step. This time use the String and its operations.

1. Use the interface from the previous tutorial and create the variable declaration as follows. The String value can be get from "Built-in" menu and click at "Text". Notice the different in color.

2. Create the blocks as follows. This set of block will perform the "Join" operation on num1 and num2 and assign the result value to num3. This operation will connect one string with other string.



3. Display the result to the TA.

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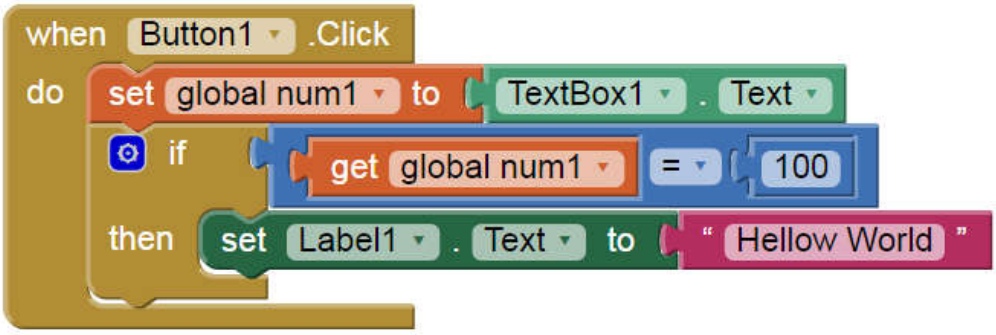
If-then statement

1. In your interface design, you need to drag 1 button, 1 label and 1 text box.

2. Go to your block view. Drag the if-then block from the Built-in > Control into the block design view.

3. Firstly, you need to create the global variable num1 and initialize value to 100. On the button click event, you need to set the value of the num1 to textbox1's. If the value of the textbox1 is 100, the label1 will show "Hellow World"



4. Complete the following table

Input in textbox1	Text in label1
50	
150	
100	

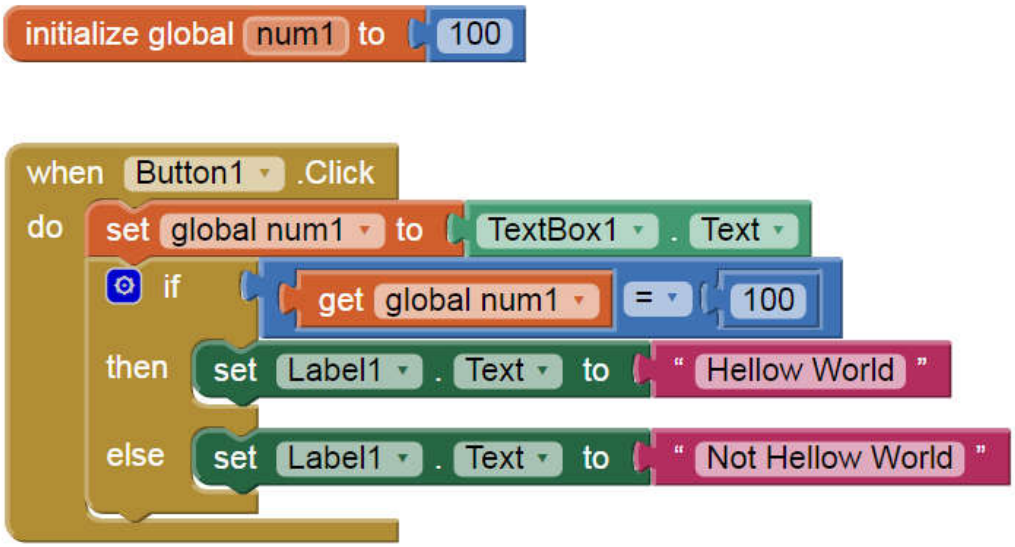
Remark: You need to click the button every time you input a new value.

If-then-else statement

Create the same interface as **If-then statement** tutorial.

1. Go to your block view. Drag the if-then block from the Built-in > Control into the block design view.

2. On the button click event, you need to set the value of the num1 to textbox1's. If the value of the textbox1 is 100, the label1 will show "Hellow World". Otherwise, the label1 will show "Not Hellow World"



3. Complete the following table

Input in textbox1	Text in label1
50	
150	
100	

Remark: You need to click the button every time you input a new value.