

Fluidic Manipulation Application








How to modify the Fluidic Manipulation Application

1. The user is referred to the original publication to understand the principles of the Fluidic Manipulation Application, which will aid in the modification of the code towards one's needs.
2. The Processor_info folder in the Fluidic Manipulation Application folder contains all the information regarding a specific microfluidic processor.
 - a. To modify the chip design displayed in the main window of the application, the user should change the chip.png file in the Processor_info folder

_Manipulation_Application > Processor_info				
Name	Date modified	Type	Size	
Arduino_pins	4/7/2020 10:18 PM	Text Document	1 KB	
chip	9/6/2019 8:56 AM	PNG File	30 KB	
perimeter_valves	9/5/2019 7:00 PM	Text Document	1 KB	
reservoirs	9/5/2019 6:58 PM	Text Document	1 KB	
size	9/5/2019 6:57 PM	Text Document	1 KB	
valves_positioning	9/5/2019 7:01 PM	Text Document	1 KB	
walls	9/5/2019 6:57 PM	Text Document	1 KB	

- i. The file should be named chip.png, and it should be a .png file. The file size should be 700 x 700, to be displayed correctly.
- b. To modify the design of the device, and reflect this modification in the application, the user needs to update the following files in the Processor_info folder:
 - i. **perimeter_valves.txt** (dictionary)
 - ii. **reservoirs.txt** (dictionary)
 - iii. **size.txt** (pair of values separated by a comma)
 - iv. **valves_positioning.txt** (dictionary)
 - v. **walls.txt** (dictionary)
- c. **DO NOT** change filenames, only their content. The code will gather the information from these files to operate the open, close and wait instructions.
- d. The Arduino_pins.txt file contains the information regarding which pins code each valve. This will be system specific, as you will physically connect each pin. Make sure to write down the pin number to each actuator in the physical system, and modify this dictionary to make the Arduino perform the proper operations.

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