Mbed-Simulator: All the modifications

Rapid Embedded

# Adding Components:

1. Implementation of the Push Button:
   1. Added the button.png (image of the component) to viewer/img.
   2. I added in viewer/js-ui/viewer.js:

{ component: 'PushButton', name: 'Push button',  pins: [ 'Button' ] },

inside var components = [ … ]

* 1. Added the push\_button.js file in viewer/js-ui/components (implementation of the button in JavaScript)
  2. Added in viewer/viewer.html:

<script type="text/javascript" src="/js-ui/components/push\_button.js">. </script>

under   <!-- UI handling --> (the file directory of the JavaScript file in c.)

1. Implemented the Potentiometer (same process as for the Push Button)
2. Implementation of the PWM Speaker Component
   1. In viewer/js-hal/gpio.js
      1. Add the function get\_period\_us(pin), the function return the period\_us of the PWM pin and is implemented similarly as the  function get\_type(pin).
      2. Add obj.get\_period\_us = get\_period\_us; at the end of the file.
   2. As for the rest it is the same process as for the Push Button.

# Modifications in the mbed-simulator-hal folder

1. Increased the resolution PWM pin's period to us instead of ms.
   1. In viewer/js-hal/gpio.js
      1. Change the variable name periode\_ms to periode\_us, int the function init\_pwmout()
      2. Change the name of the function function period\_ms(pin, pw) to function period\_us(pin, pw) and the line declaredPins[pin].period\_us = pw; to declaredPins[pin].period\_us = pw;
      3. Change line 255 obj.period\_ms = period\_ms; to  at the end of the file obj.period\_us = period\_us;
   2. In mbed-simulator-hal/mbed-os/target/TARGET\_SIMULATOR/pwmout\_api.c, in the functions, void pwmout\_period\_s(pwmout\_t\* obj, int us), void pwmout\_period\_ms(pwmout\_t\* obj, int us) and void pwmout\_period\_us(pwmout\_t\* obj, int us), change MbedJSHal.gpio.period\_ms($0, $1); to MbedJSHal.gpio.period\_us($0, $1);

and convert the input in the next line from us to ms.

1. Increased the resolution PWM pin's pulse width to us instead of ms.