

Simulator user guide v1.1

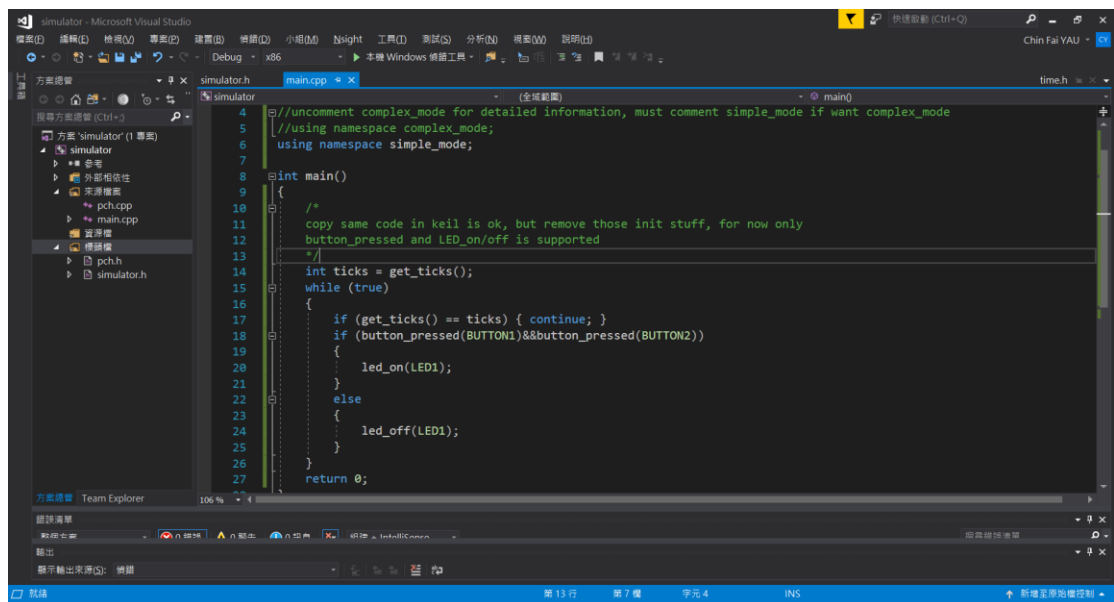
Abstract

Both simulator_console and simulator_gui can be used to test your program, however simulator_gui is recommended.

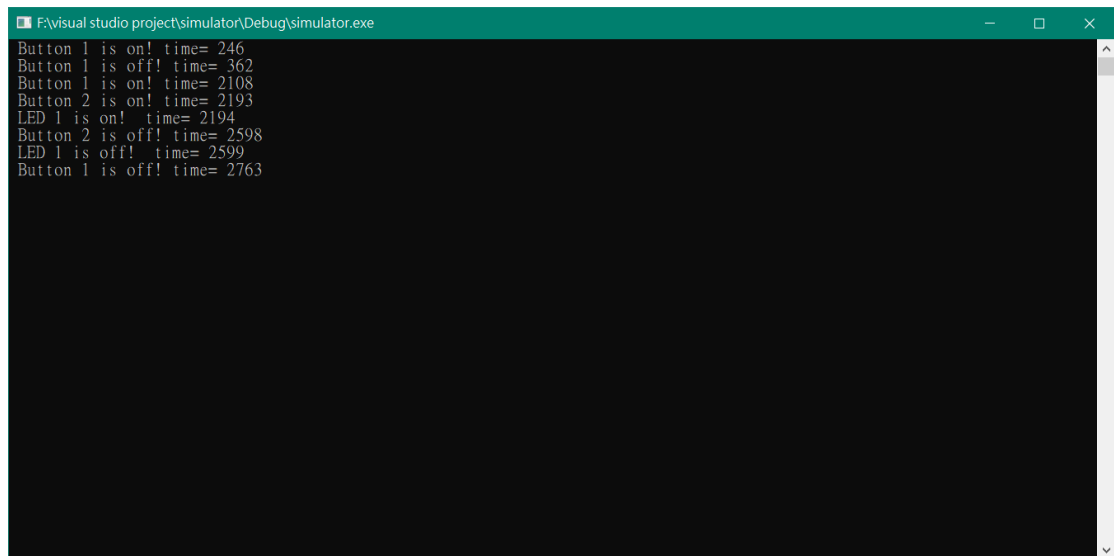
1. simulator_console

The aim of this simulator is to help people who cannot access to the internal mainboard to debug their program (Windows only).

1. Download the project and copy the folder “simulator”
2. Download and install visual studio, when install, choose C++
3. Open project “simulator” in visual studio
4. In source file main.cpp, you can test out anything thing with button and LED.
Totally 3 buttons and 3 LED can be used. All information can be found in simulator.h if anyone want to dive deep into implementation.
5. Use the namespace simple_mode for easier and short output, complex_mode for detailed output.



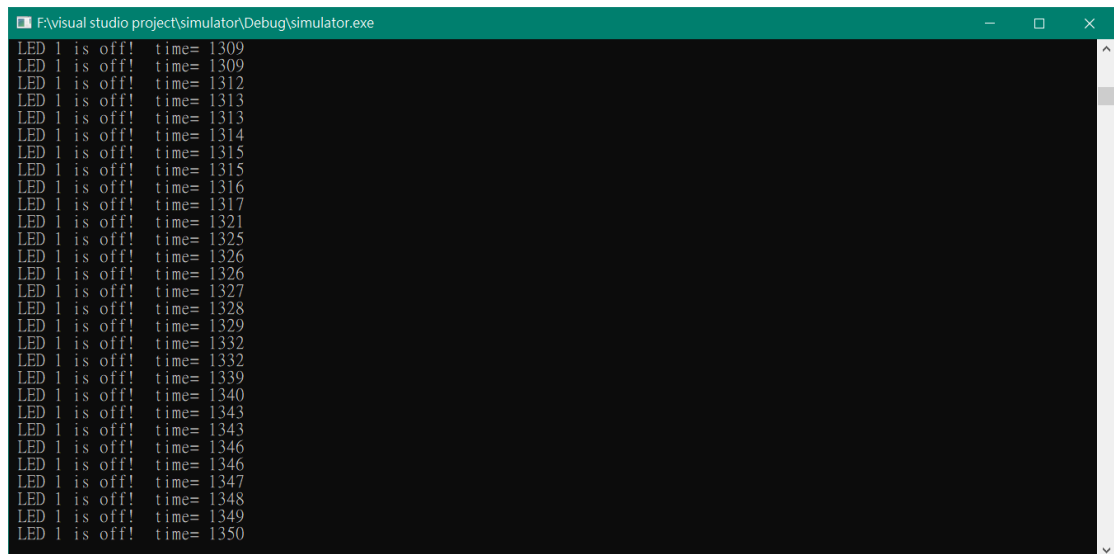
Simple output example:



A screenshot of a Visual Studio debug console window. The title bar reads "F:\visual studio project\simulator\Debug\simulator.exe". The console output shows a sequence of events: Button 1 is on! time= 246, Button 1 is off! time= 362, Button 1 is on! time= 2108, Button 2 is on! time= 2193, LED 1 is on! time= 2194, Button 2 is off! time= 2598, LED 1 is off! time= 2599, and Button 1 is off! time= 2763.

```
F:\visual studio project\simulator\Debug\simulator.exe
Button 1 is on! time= 246
Button 1 is off! time= 362
Button 1 is on! time= 2108
Button 2 is on! time= 2193
LED 1 is on! time= 2194
Button 2 is off! time= 2598
LED 1 is off! time= 2599
Button 1 is off! time= 2763
```

Detailed output:

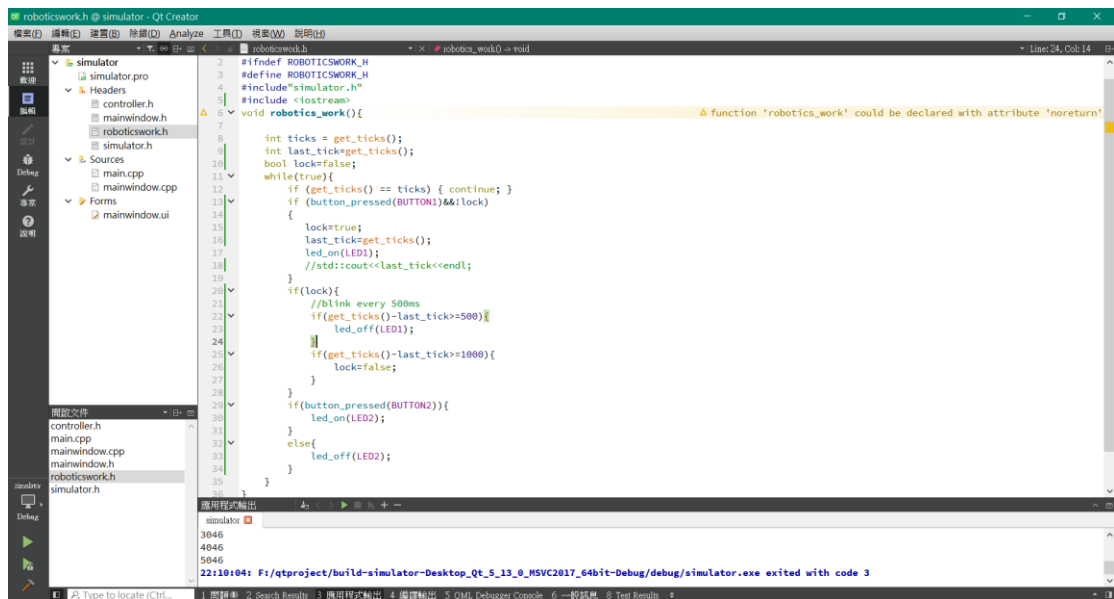


A screenshot of a Visual Studio debug console window. The title bar reads "F:\visual studio project\simulator\Debug\simulator.exe". The console output shows a series of "LED 1 is off!" messages with timestamps ranging from 1309 to 1350.

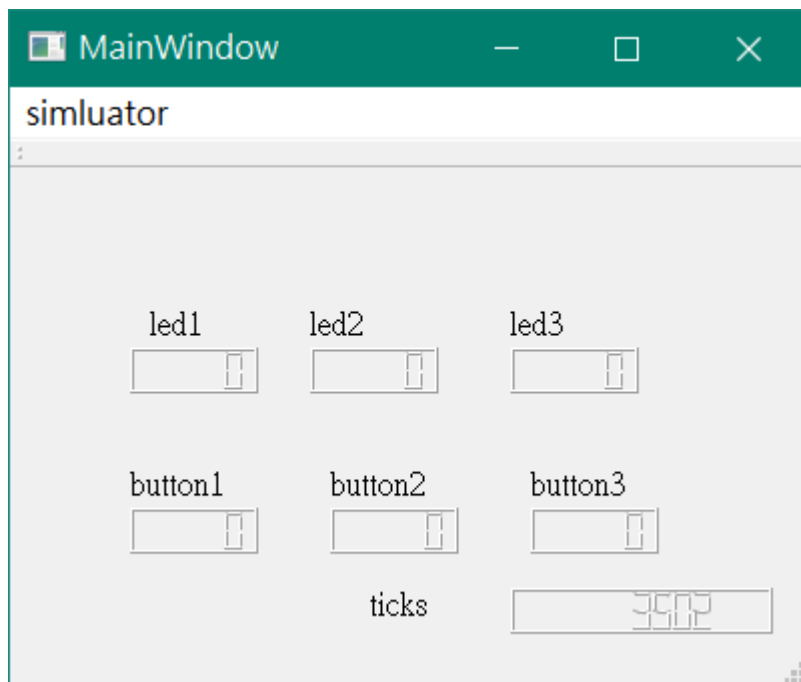
```
F:\visual studio project\simulator\Debug\simulator.exe
LED 1 is off! time= 1309
LED 1 is off! time= 1309
LED 1 is off! time= 1312
LED 1 is off! time= 1313
LED 1 is off! time= 1313
LED 1 is off! time= 1314
LED 1 is off! time= 1315
LED 1 is off! time= 1315
LED 1 is off! time= 1316
LED 1 is off! time= 1317
LED 1 is off! time= 1321
LED 1 is off! time= 1325
LED 1 is off! time= 1326
LED 1 is off! time= 1326
LED 1 is off! time= 1327
LED 1 is off! time= 1328
LED 1 is off! time= 1329
LED 1 is off! time= 1332
LED 1 is off! time= 1332
LED 1 is off! time= 1339
LED 1 is off! time= 1340
LED 1 is off! time= 1343
LED 1 is off! time= 1343
LED 1 is off! time= 1346
LED 1 is off! time= 1346
LED 1 is off! time= 1347
LED 1 is off! time= 1348
LED 1 is off! time= 1349
LED 1 is off! time= 1350
```

2. simulator_gui

1. Download and install Visual studio 2019 and download Qt. Choose MSVC 2019 when you install Qt options.
2. Copy and paste your code into roboticswork.h



3. Clean the project and rebuild. (MUST DO)



- 4.
5. Totally 3 buttons and 3 led are supported. Also, a tick count to indicate is program dead.
6. Press keyboard key 1/2/3 to simulate button press.
7. The program shows 1111 if on, 0 if off.