**Readme file for Assignment 4: Seven Segment Display and 4x4 Keypad**

* The following commands are supported by the code:

1. Color <Color\_Name>
2. Blink <Blink\_Rate>
3. Start
4. Stop
5. Pause
6. Resume.

* All the above commands can be given from the console.
* Change of colours and change of blink speed can be done through switch 1 and switch 2 ofTIVA board respectively.
* Key 1 of the 4x4 keypad is used to toggle between Start and Stop State.
* Key 2 of the 4x4 keypad is used to toggle between Resume and Pause State.

**4x4 Key Pad Support :**

* In addition to the existing functionalities, support has been added for “Start, Stop, Pause, Resume”.
* In the current code, we can give start, stop, pause and stop commands either through console or through the 4x4 keypad.
* Start and Stop have higher precedence over pause and resume.
* Once we give pause command, the current state of the system would be retained until we receive another resume command, either through the console or through the keypad.
* Once we give the stop command, no commands will be processed until we get the start command either through the console or through the keypad.
* Once start command is received , we start from the initial colour (green) with the lowest blinking speed.

**Seven Segment Display Support:**

* In addition to 4x4 keypad support, we also have SSD (Seven Segment Display) support.
* The rightmost SSD will display the colour code (1-> Green, 2-> Blue, ……. 7-> White).
* The two SSDs from the left end will show the number of colour changes.
* When the system goes into pause state the seven segment displays will retain their numbers.
* Even if we give any commands in between, it will not reflect on the seven segment displays until we give the resume command.
* Once we give the stop command, the readings on all the seven segment displays will show 0.
* Once we give Start command, the right most LED shows 1 and the two LEDs from the left end show ‘01’ indicating that this is the first colour as we have re-started the system.
* The second SSD from the right has not been used for this assignment.