ARMSIM EMBEST BOARD PLUGIN PROGRAMS

1. **Write a program to light up LEDs according to the value supplied in the register R0, to the left or right or both, using Software Interrupt SWI 0x201 .**
   Lighting up of LEDs:

   If **R0= 1 Right LED**
   R0=2 Left LED
   R0=3 Both LED

2. **Write a program to display hexadecimal numbers from 0 to F and F to 0 as follows:**
   if left button is selected display F to 0
   if right button is selected display 0 to F.
   Use SWI 0x200.

(The appropriate segments light up to display a number or a character. The pattern of segments to be litup is assigned to register R0 before the call to swi 0x200)

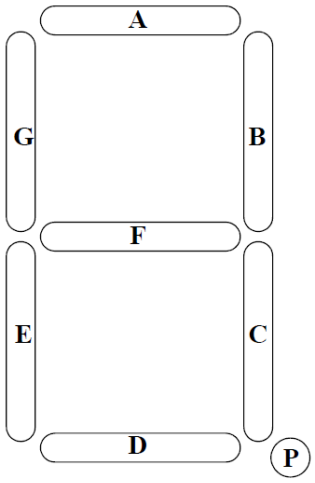
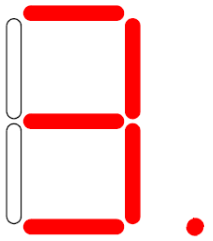


Table 6: Segmen t byte values

Display byte values	
A	0x80
B	0x40
C	0x20
P	0x10
D	0x08
E	0x04
F	0x02
G	0x01

Example: number "3" plus "dot"



As an example, the number 3 plus the right hand dot would have a pattern value computed as the logical OR of the values of the segments "A,B,C,D,F,P" to form the integer: `0x80 | 0x40 | 0x20 | 0x08 | 0x02 | 0x10 = 0xFA`, to be assigned to r0.

3. **Write a program to display a string to scroll from Right to Left on the LCD screen from location (x,y), using software interrupt SWI 0x204.**
   Note:
   a. **String : Ex - "PESU"**
   b. **Store starting address of the string in the register R2.**
   c. **Store the position of display in the registers as follows:**
      i. R0=x
      ii. R1=y
   d. Use **SWI** 0x206 instruction to clear the display on the LCD screen.

- ***Important Note:*** *All Plug-ins have to be enabled explicitly by checking their option in the File > Preferences menu and selecting the appropriate line from within the tab labelled Plugins.*

1) Install ARMSIM simulator
2) Go to File-->Preferences->Plugins and select "Embest Board Plugin"
3) Go to view-->PluginsUI
4) Run the code(File →Load-→Select the program written in notepad file with extension .s