```
//=============================================
// Step 08-1
// Beep do re mi fa so la si do
// JP2(2-3) / JP3(2-3) / JP4(2-3) / JP5(2-3) / JP6(2-3)
// JP7(2-3) Beep
//=============================================

#include "mbed.h"

DigitalIn   swL(p18);   // JP2(2-3)
DigitalIn   swU(p19);   // JP3(2-3)
DigitalIn   swD(p20);   // JP4(2-3)
DigitalIn   swR(p21);   // JP5(2-3)
DigitalIn   swE(p22);   // JP6(2-3)

PwmOut      beep(p23);  // JP7(2-3)

//---------------------------------------------
// Main
//---------------------------------------------
int main()
{
    float freq[5] = {523,587,659,698,784};

    swL.mode(PullUp);       // Pull Up
    swU.mode(PullUp);       // Pull Up
    swD.mode(PullUp);       // Pull Up
    swR.mode(PullUp);       // Pull Up
    swE.mode(PullUp);       // Pull Up

    while(1)
    {
        //-----------------------------
        // Left SW
        //-----------------------------
        if( swL == 0 )
        {
            beep.period(1.0/freq[0]);
            beep.write(0.5);        //Duty
            while(swL == 0 );

        }
        //-----------------------------
        // Up SW
        //-----------------------------
        else if( swU == 0 )
        {
            beep.period(1.0/freq[1]);
            beep.write(0.5);        //Duty
            while(swU == 0 );
        }
        //-----------------------------
        // Down SW
        //-----------------------------
        else if( swD == 0 )
        {
            beep.period(1.0/freq[2]);
            beep.write(0.5);        //Duty
            while(swD == 0 );
        }
        //-----------------------------
        // Right SW
        //-----------------------------
        else if( swR == 0 )
            beep.period(1.0/freq[3]);
            beep.write(0.5);        //Duty
```

```
67              while(swR == 0 );
68          }
69          //-----------------------------
70          // Enter SW
71          //-----------------------------
72          else if( swE == 0 )
73          {
74              beep.period(1.0/freq[4]);
75              beep.write(0.5);        //Duty
76              while(swE == 0 );
77          }
78          //-----------------------------
79          // SW All Off
80          //-----------------------------
81          else
82          {
83              beep.write(0.0);
84          }
85          //-----------------------------
86
87      }
88  }
```