Problem :

Generate a square wave using DAC

```
#include "LPC23xx.h"

void delay(unsigned int k)
{
unsigned int i,j;
for(i=0;i<=k;i++);
for(j=0;j<=0xFF;j++);
}

int  main ()
{
        unsigned int value=0;

    unsigned int max=0x3FF;

        PINSEL1 = 0x00200000;

   PCLKSEL0 = 0x00C00000;
   PINMODE1=0x00300000;
```

```
 while(1)
 {


  DACR = value<<6  ;
  delay(0xff);
  DACR = max<<6;

  delay(0xff);
}
return 0;
}
```

Explanation:

PINSEL1 = 0x00200000; Please refer page number 158 of LPC2378 data sheet

Bit 21:20 is set to 10 to choose the DAC output (AOUT) of LPC2378.

PCLKSEL0 = 0x00C00000; Refer page number 62 of LPC2378 datasheet

Setting bit 23:22 to 11 chooses peripheral clock for DAC

DACR = value<<6 ;

The 10-bit value to the DAC should reside from bit 15 to bit 6.
Hence we have to shift our value left 6 times.

PINMODE1=0x00300000;

Setting bits 21:20 to 11 chooses on chip pull down resistors for the ports.