Lab-3

Friday, October 09, 2020 11:27 AM

Title:- Configuring ADC with LPC2129

Date:- 02/09/2020

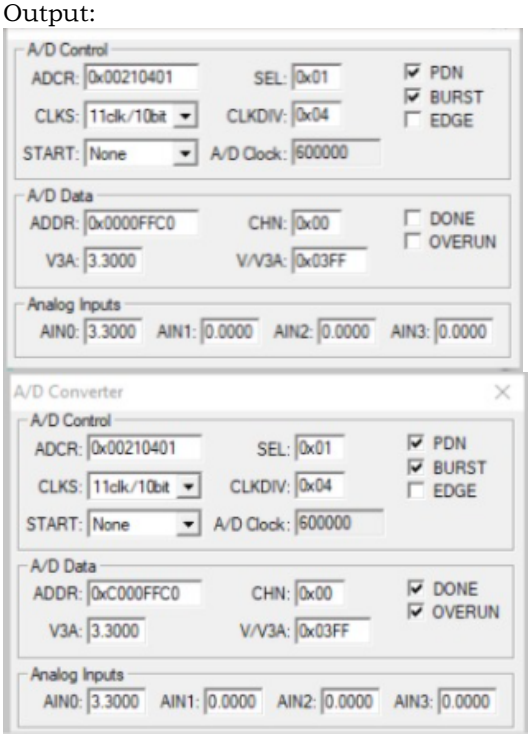
Program :-

AIM: Select channel no. 0 for giving analog input 3.3 V and configure ADC control register ADCR for the channel no 0 and store the output of ADC in a separate register

Source Code:

```
#include<LPC21xx.h>

int main()

{

    unsigned int val; //Declaring register for polling approach

    PINSEL1=0x00400000; // Selecting channel 0 AIN0

    ADCR = 0x00210401; // configuring ADCR FOR CHANNEL 0



    // by polling approach

    while(!(ADDR & 0x80000000)) // loop will continue till done bit is not 1

    {

        val = ADDR>>6 & 0x3FF;    // shifted by 6 because 15:6 bits are important, for

                                            //getting last 10 digits we wii do AND operation
with 3FF

    }

}
```

Output:

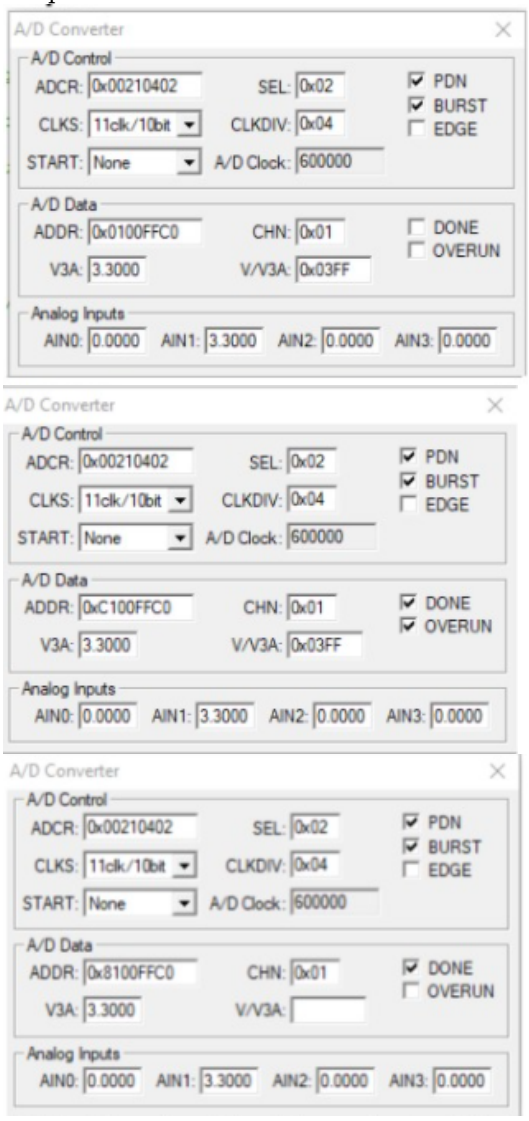


2) Select channel no. 1 for giving analog input 3.3 V and configure ADC control register ADCR for the channel no 0 and store the output of ADC in a separate register.

```
#include<LPC21xx.h>



int main()

{

    unsigned int val; //Declaring register for pooling approach

    PINSEL1=0x01000000; // Selecting channel 1 AIN1

    ADCR = 0x00210402;   // configuring ADCR FOR CHANNEL 1



    // by pooling apporach

    while(!(ADDR & 0x80000000)) // loop will continue till done bit is not 1

    {

        val = ADDR>>6 & 0x3FF; // shifted by 6 because 15:6 bits are important, for getting last                                          // 10 digits we wii do AND operation with 3FF
```

```
    }

}
```

Output:



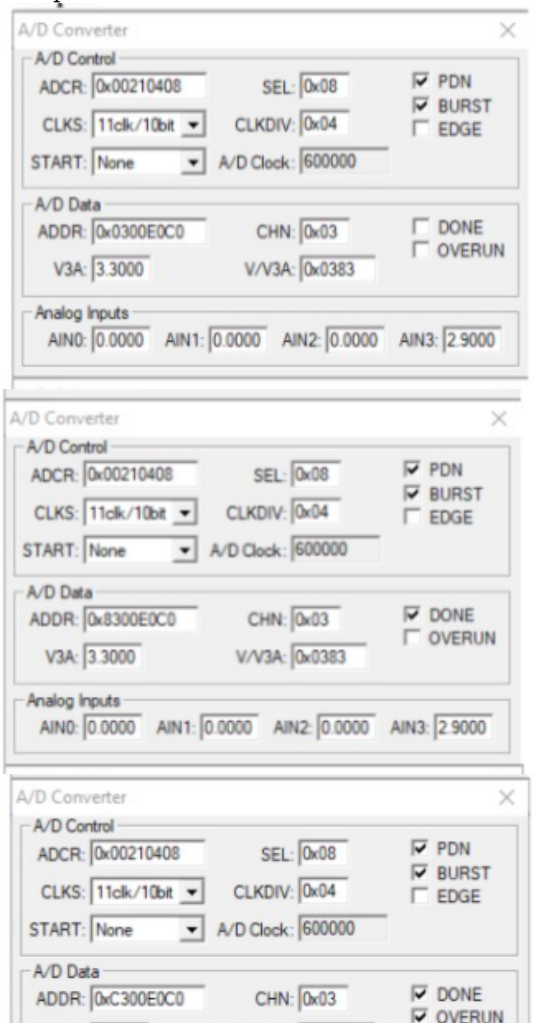
3) Select channel no. 3 for giving analog input 2.9 V and configure ADC control register ADCR for the channel no 3 and store the output of ADC in a separate register.

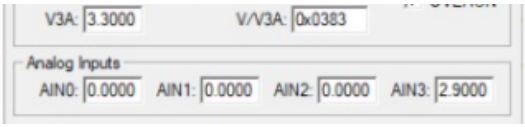
Source code:

```
#include<LPC21xx.h>

int main()

{
```

```
    unsigned int val; //Declaring register for pooling approach

    PINSEL1=0x10000000; // Selecting channel 3  AIN3

    ADCR = 0x00210408; // configuring ADCR FOR CHANNEL 3



    // by pooling apporach

    while(!(ADDR & 0x80000000)) // loop will continue till done bit is not 1

    {

        val = ADDR>>6 & 0x3FF; // shifted by 6 because 15:6 bits are important, for
getting last                                                    // 10 digits we wii do AND operation
with 3FF

    }

}
```

Output:





Inference:

In this experiment I learnt how to configure ADC with LPC2129, its registers ADCR.2, how to select channels.