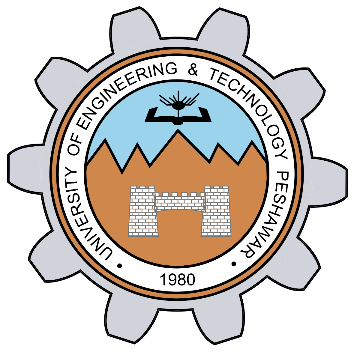
**Lab:13**

**Interfacing DAC with 8051 Microcontroller**



**MBSD Lab**

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**Submitted by:**

**Maaz Habib**

**Reg no:**

**20Pwcse1952**

“On my honor, as a student of University of Engineering and Technology Peshawar, I have neither nor received unauthorized assistance on this academic work”

**Submitted to:**

**Dr: Amaad Khalil**

**Task1:**

**Interfacing DAC with 8051**

**Answer:**

To interface a Digital-to-Analog Converter (DAC) with an 8051 microcontroller, you can follow these steps:

1. Choose a DAC: Select a suitable DAC chip that meets your requirements in terms of resolution, output range, and interface compatibility with the 8051 microcontrollers. Some commonly used DAC chips include the MCP4921, DAC0832, and AD5667.

2. Hardware Connections: Connect the DAC to the appropriate pins of the 8051 microcontrollers. The connections typically include power supply (VCC and GND), control signals (CS, CLK, and DATA), and the analog output (OUT).

3. Code Implementation: Write code to send digital values to the DAC from the microcontroller.

Here's an example code snippet in C that demonstrates how to interface a DAC0832 with an 8051 microcontroller:

**Source Code:**

#include <reg51.h>

#include <stdio.h>

sbit rd = P3^4;

sbit wr = P3^5;

sbit intr = P3^2;

void main(void)

{

P1 = 0x00; // make P1 as output port

while(1)

{

rd=1;

wr=0; // low-to high pulse for start conversion

wr=1;

while(intr==1); // when conversion is completed, ADC produces high-to-low interrupt pulse

rd = 0;

P1 = P2;

}

}

**Schematic:**

