

PRACTICAL LAB 02

Using Transfer, Arithmetic, and Logic Functions in the PIC16F84A Microcontroller

Required materials:

PIC16F84A microcontroller

MPLAB X IDE development environment

Learning Objectives

By the end of this lab, the student will be able to:

1. Identify and use data transfer instructions and their effects on registers.
2. Use arithmetic instructions to perform basic calculations.
3. Apply logic instructions to manipulate register bits.
4. Write, assemble, and simulate a complete program on the PIC16F84A.

Exercise 1: Transfer Instructions

Goal: Practice MOVLW, MOVWF and MOVF instructions.

Exercise 2: Arithmetic Instructions

Goal: Perform addition and subtraction operations between registers.

Exercise 3: Logic Instructions

Goal: Test logic operations.

Observation:

Check results using the Watch window in MPLAB.

