MPCA LAB MINI PROJECT

PROJECT TITLE: TEMPERATURE DETECTION AND MONITORING SYSTEM

SECTION: 'A'

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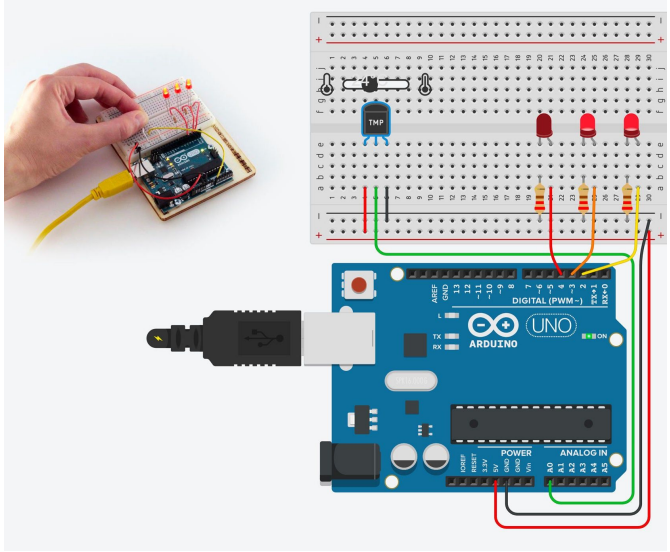
PROBLEM STATEMENT

To tinker and simulate a Dynamic Temperature Detection and Monitoring System with Temperature Controlled Fan and Buzzer

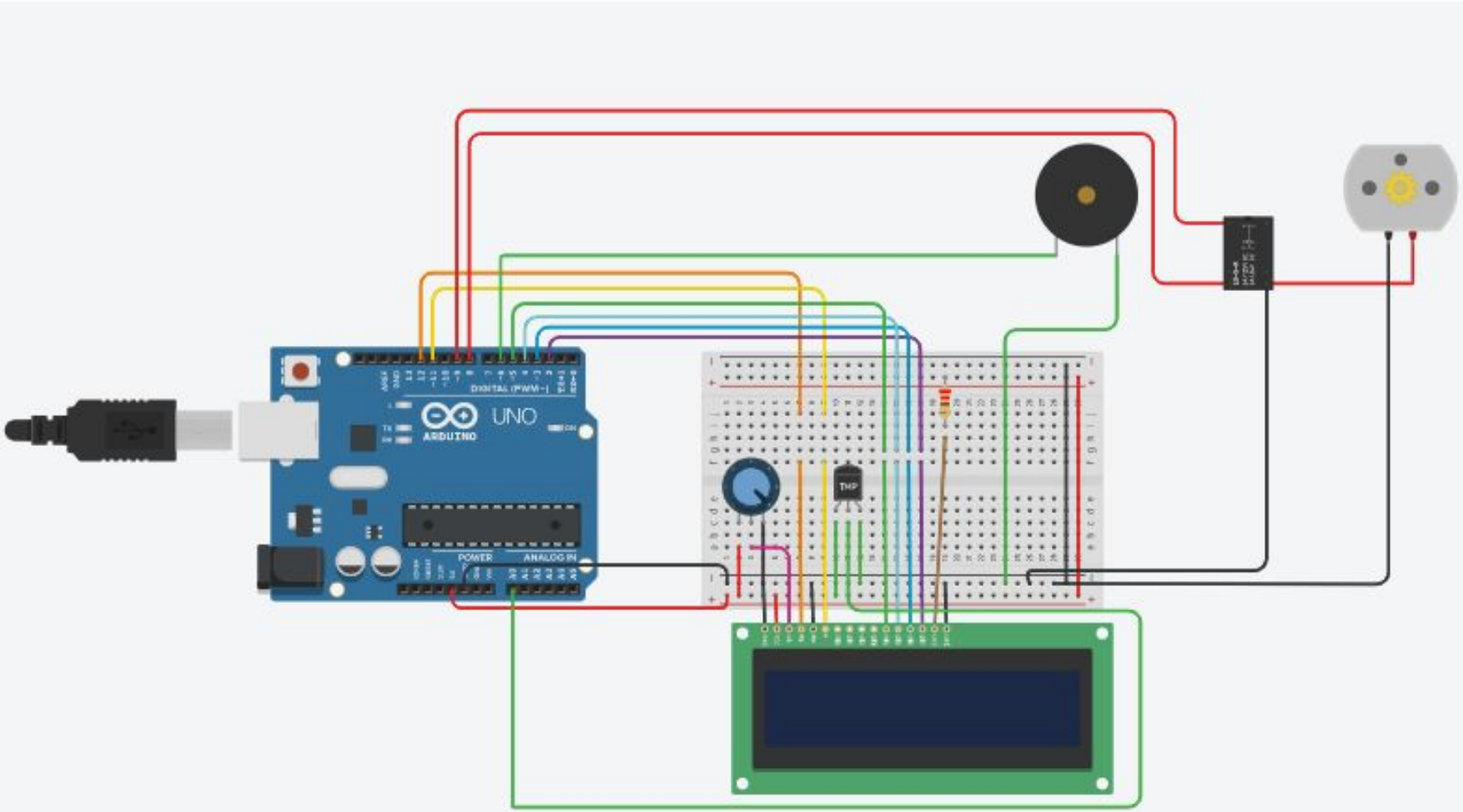


INTRODUCTION

Our project comprises of three deliverables:

- A temperature detection sensor which displays the current temperature on LCD
- a buzzer system which increases in frequency with increase in temperature.
- a fan(dc motor) whose speed increases with increase in temperature.

BLOCK DIAGRAM



REQUIRED COMPONENTS

- Breadboard
- LCD display
- Arduino UNO R3
- TMP36 Temperature Sensor
- Piezo Buzzer
- Relay SPDT
- Resistors (220 ohm)
- Potentiometer

PROJECT DESCRIPTION/DEMONSTRATION

The main aim of this project is to create a real time temperature detection and display system which can be handy to check weather conditions in surrounding areas.
It has a buzzer that turns on when the temperature exceeds a certain limit and also a fan that turns on (we have used dc motor for the fan).

APPLICATIONS

The temperature detection and monitoring system has several applications including

- in a fire detection and alarm system
- in home automation system
- air quality monitoring system

REFERENCES(Website links, Books etc.)

About TMP36 temperature sensor
https://learn.adafruit.com/tmp36-temperature-sensor

Implementation of DC motor
https://www.tinkercad.com/things/llEFwFIEoMs-arduino-dc-motor

About Relay SPDT
https://www.electroschematics.com/spdt-relay-switch/

THANK YOU