Report on

‘Arduino Digital Clock’

By

N Pravesh

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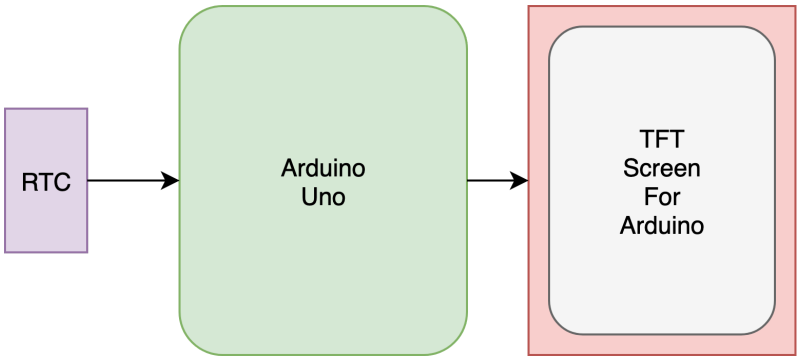
Objective:

To construct a Digital clock device that can display time, day, date and temperature using a TFT screen.

Description:

This is a simple project to display time, day, date and temperature using a TFT screen shield for Arduino Uno. This device is just a tabletop clock that can even display the name of the company at a regular interval specified.

Block Diagram:



System Requirement Specification

Hardware Requirement:

- 2.4inch TFT Screen
- Arduino Uno
- RTC DS3231

Software Requirement:

- Arduino IDE
    - Library: 1. DS3231.h
    - 2. Adafruit_GFX.h

- 3. Adafruit_TFTLCD.h
- 4. SPI.h

Working Principle:

First, the rtc is used to obtain the current time, day, date and temperature and store it in Arduino. Now the Arduino process it and the libraries convert the data into TFT writeable language and display it in the TFT screen.

Circuit Connections:

- Connection of Arduino to RTC DS3231:
  - A4(SDA) - SDA
  - A5(SCL) - SCL
  - 5v - Vcc
  - Gnd - Gnd
- Connection of Arduino to TFT screen:
  - Place the TFT shield on the Arduino

Result:

The result of the project Digital Clock is verified and it satisfied all my requirements without any exceptions.