Project 1

Digital clock using 4-digit 7 segment display

Introduction

To display small amount of data with Raspberry Pi, we can use 4 digit 7-segment Display.
7 Segment Display has seven segments in it and each segment has one LED inside it to display the numbers by lighting up the corresponding segments.

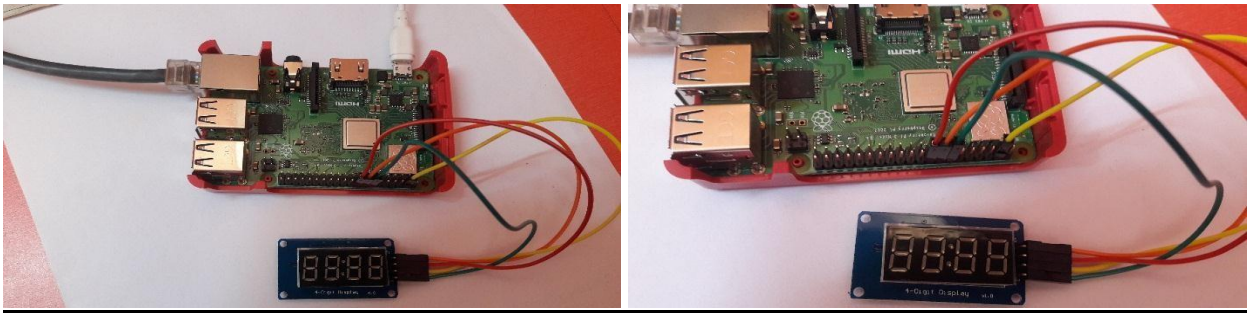
Hardware Requirements

1. Raspberry Pi Model A/B/B+
2. 4-digit 7 Segment Display
3. Jumper wires (Female to Female)

Hardware Setup

Connect your 4-digit 7 segment display with Raspberry Pi's GPIO Pins.

TM1637 Board Pin	Function	RPI Physical Pin	Raspberry Function
GND	Ground	14	GND
VCC	+ 5V Power	4	5V
DI0	Data In	18	GPIO 24
CLK	Clock	16	GPIO 23



Python Coding

```
import sys

import time

import datetime

import RPi.GPIO as GPIO import tm1637

#CLK -> GPIO23 (Pin 16)

#Di0 -> GPIO24 (Pin 18)

Display = tm1637.TM1637(23,24,tm1637.BRIGHT_TYPICAL)

Display.Clear()

Display.SetBrightnes(1)

while(True):

    now = datetime.datetime.now()

    hour = now.hour

    minute = now.minute

    second = now.second

   currenttime = [ int(hour / 10), hour % 10, int(minute / 10), minute % 10 ]

   Display.Show(currenttime)

   Display.ShowDoublepoint(second % 2)

   time.sleep(1)
```

The above script needs the **tm1637.py** script to work, so place both files in the same folder.

```
pi@raspberrypi: ~/4digitTime
File  Edit  Tabs  Help
pi@raspberrypi:~/4digitTime $ ls
clock.py  tm1637.py
```

Start the script with following command

```
pi@raspberrypi: ~/4digitTime
File  Edit  Tabs  Help
pi@raspberrypi:~/4digitTime $ python clock.py
```

Output