

# MBED STOCK AND WEATHER DISPLAY

## Team Members:

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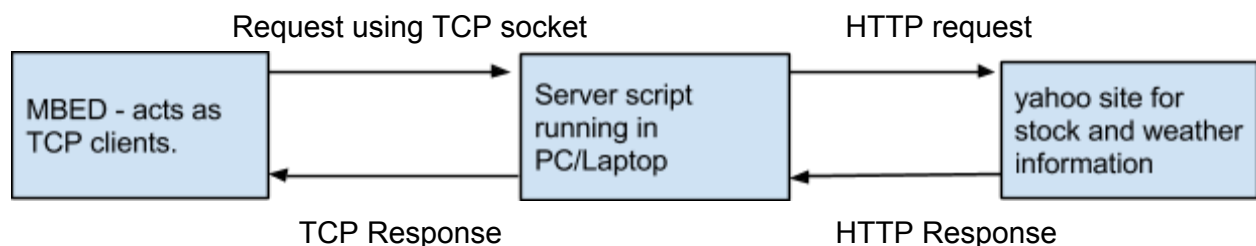
**Aim :** The Aim of this project is to display stock and weather details on the LCD according to User's input using Network communication between MBED and the server .

## Components used:

1. MBED NCP 1768
2. Text LCD : <http://developer.mbed.org/components/HD44780-Text-LCD/>
3. Ethernet connection
4. Push buttons
5. Breadboard and jumper wires.

## Overview:

**Image-1**  
**Data Flow**

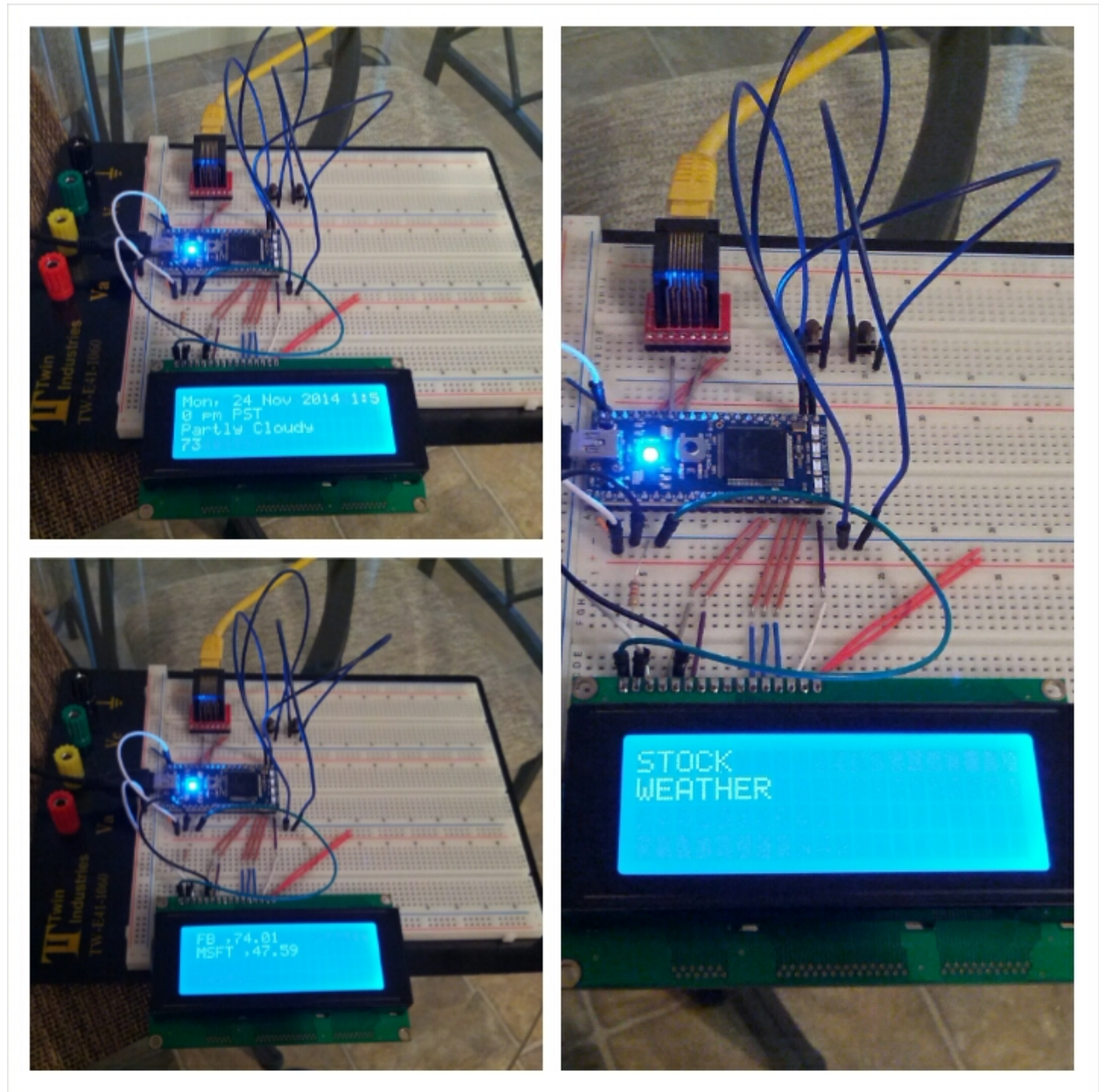


User selects the input by use of switch buttons. Based on the input chosen by the user either stock information or weather forecast is displayed on the LCD.

To get the current stock or weather information , The MBED acts as a client and communicates the users input to the PC/Laptop using a TCP network socket . PC acts as the server, opens a TCP socket and waits for the incoming connection from MBED. Once the connection is established , based on the user input received from the MBED , a server script written in python runs at the PC/Laptop communicating with yahoo server to get the requested stock information and weather information . It then sends the stock symbol and price or the weather details received from the yahoo site back to the MBED . The MBED displays the received information in the LCD.

Image-2

## LCD DISPLAY AND CONNECTION



The user selects either stock or weather using push buttons based on what information the user wants to display in LCD . MBED sends a request to the server and displays the response received (stock price or weather details) in the LCD.

**References:**

**1.Fast and Effective Embedded systems design: Applying the ARM mbed**

**2.TCP socket creation library in mbed:**

[http://developer.mbed.org/users/mbed\\_official/code/TCPEchoClient/docs/529642dd94c3/main\\_8cpp\\_source.html](http://developer.mbed.org/users/mbed_official/code/TCPEchoClient/docs/529642dd94c3/main_8cpp_source.html)

**3.LCD display library :**

<http://developer.mbed.org/users/simon/code/TextLCD/#308d188a2d3a>

**4.yahoo weather api :**<https://developer.yahoo.com/weather/>

**5.yahoo stock api :**[http://www.jarloo.com/yahoo\\_finance/](http://www.jarloo.com/yahoo_finance/)

**6.Connection for LCD display :** <http://developer.mbed.org/components/HD44780-Text-LCD/>