| Name(s) | Project Number |
|---|---|
| **Yusra Arub** | |
| | 35616 |

**Project Title**

## Internet of Things Meet My Data Binder

**Abstract**

**Objectives/Goals**

The Internet as we know 5 years ago was made of mostly computers. Today it is more than computers - cars, dishwashers, clothing, keychains - the Internet of Things has arrived.
The purpose of my science fair project is to explore the affects of Internet of Things (IoT) on my own daily learning style. I would like to take an example of my daily homework binder to make it part of the Internet of Things and make it #Smart# and interactive.

**Methods/Materials**

Raspberry Pi # ; 150 MBPs 802.11N/G/B Mini USB Wireless; 1 x 3x4 Phone-style Matrix ; Keypad; 4 x Round Force-Sensitive Resistor (FSR) (Interlink 402); 1 x Standard LCD 20x4.
Details: Includes the New Raspberry Pi Model B+ (B Plus) 512 MB - Made in UK (Sony Factory), WiFi Adapter; 8 GB Samsung MicroSD Card - Raspberry Pi Foundation Recommended MicroSD Card pre-loaded with NOOBS, Raspberry Pi B+ Case with GPIO Access; 2.5A USB Power Supply with 5-foot Micro USB Cable specially designed for the Raspberry Pi B+ delivering full 2.5A @ 5V; Premium Quality 6-foot HDMI Cable, GPIO to Breadboard Interface Board, Breadboard, Jumper Cables, Ribbon Cable, GPIO Quick Reference Card; RGB LED, 8 x LEDs (Blue/Red/Yellow/Green), 15 x Resistors, 2 x Push Button Switches, CanaKit General Guide for Beginners to Electronic Components.

**Results**

At school -> Click touch sensors to remind what#s due.
Go home -> binder LED denotes work to be done.
Need help with assignment:: LCD Display -> Receive latest tweet from friend on the subject.
Enter my personal code to secure binder.
Away from binder -> Check the status via remote site.
Receive Tweets from Counselor about upcoming deadline on LCD Display!
Record temperature for specific time interval for ongoing research
Check temperature of draught-resistant plant research project at UCR on LCD Display
Voice Activated -> change subject status via sound sensor.

**Conclusions/Discussion**

SmartBinder is simple to use. You simply touch the sensors that are seamlessly built into the subject tabs to toggle the state of the subject. The LEDs attached to each subject tab will turn red to denote subject as due. In a Wifi enabled locations the current state is pulled from the remote sites. The subject status can be updated from the website and the SmartBinder we pull the information and keep its current state

**Summary Statement**

It is about making dumb things (school binders for ex) smart and interactive using the power of internet of things.

**Help Received**

Dad's friend Ajay helped wire board.