Connected Systems: Project 1
“Somebody broke that”
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Task 1: Design Requirements

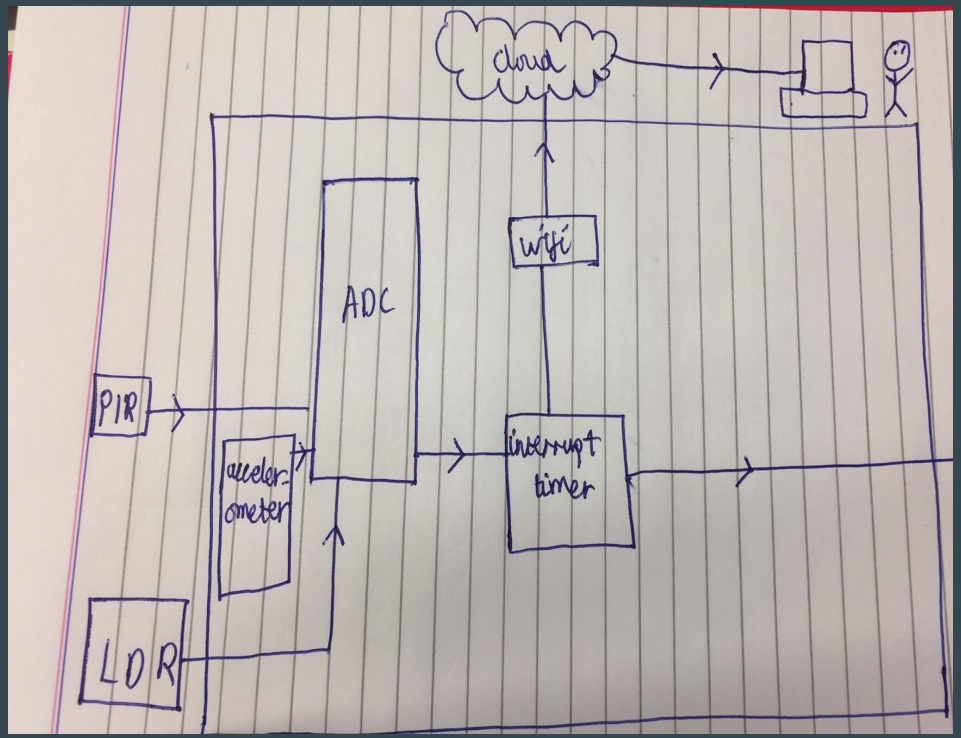
-The task was to design a wireless system which would allow a user to track the condition of their shipment.

- It should be able to record in a cloud based service whether the package has been subject to any shocks or sudden movement or opened

PROPOSED SOLUTION:

- To detect sudden movements: Accellerometer sensor built into microcontroller is used
- To detect opened package: LDR sensor is used

Package Tracker Block Diagram



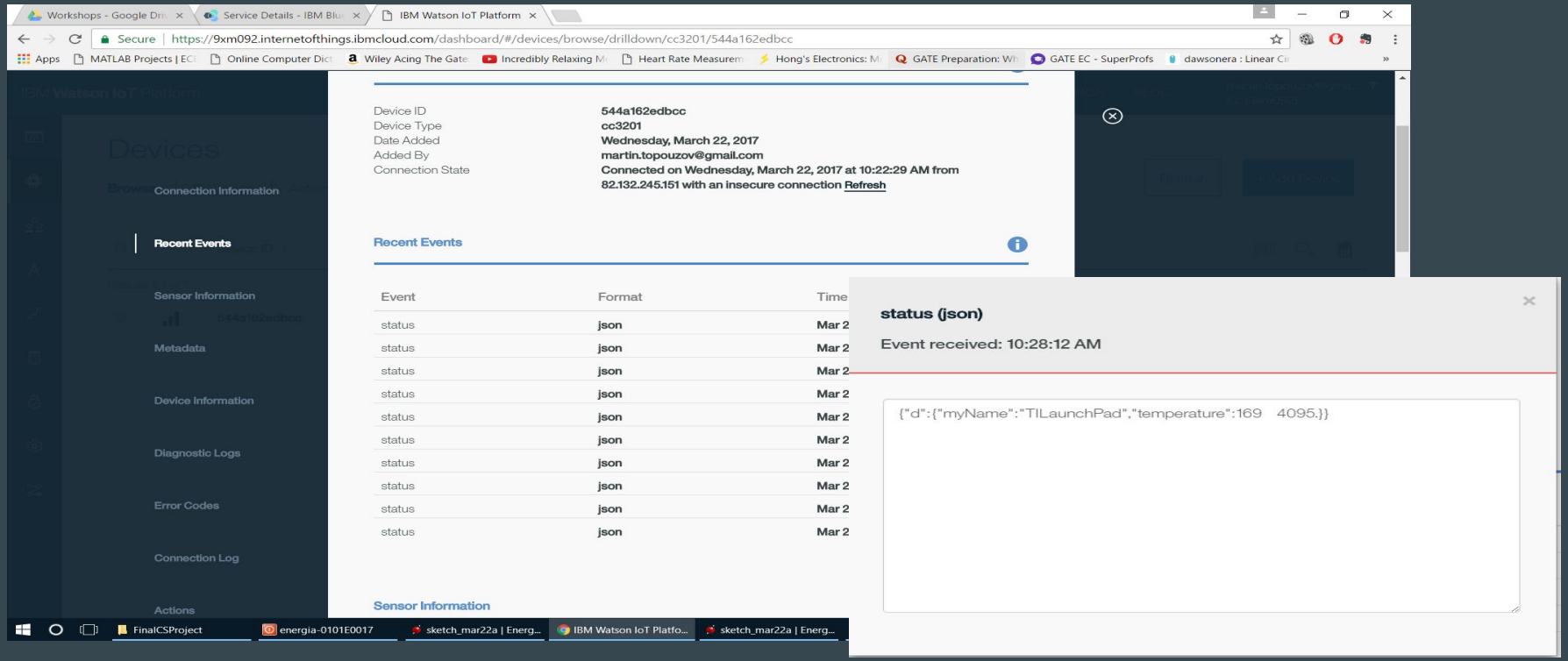
- Connect sensors to the microcontroller.

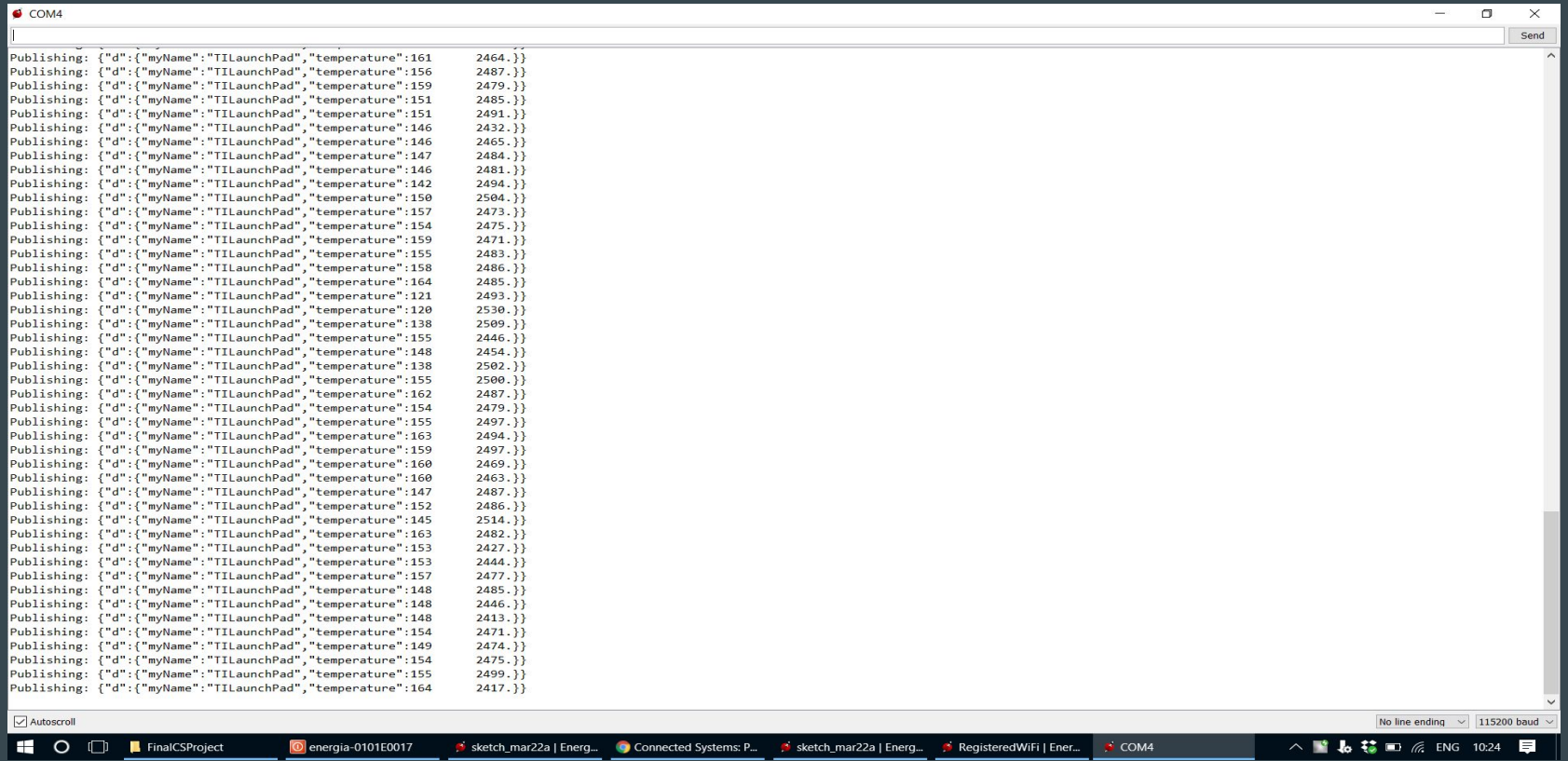
- Connect microcontroller to cloud.

- Send to cloud if package has moved (if accelerometer has triggered)

- Send to cloud if package has opened (if ldr has detected light).

Demonstration

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Critical analysis

Cloud : IBM Bluemix interface is easier to use and offers more potential than Amazon AWS or IBM quickstart

Microcontroller: TI CC3200 has built in wifi server capabilities and is therefore suitable for sending and getting data to online cloud using MQTT

Connectivity : Using GPRS or mobile communication module would allow portability and extra convenience.