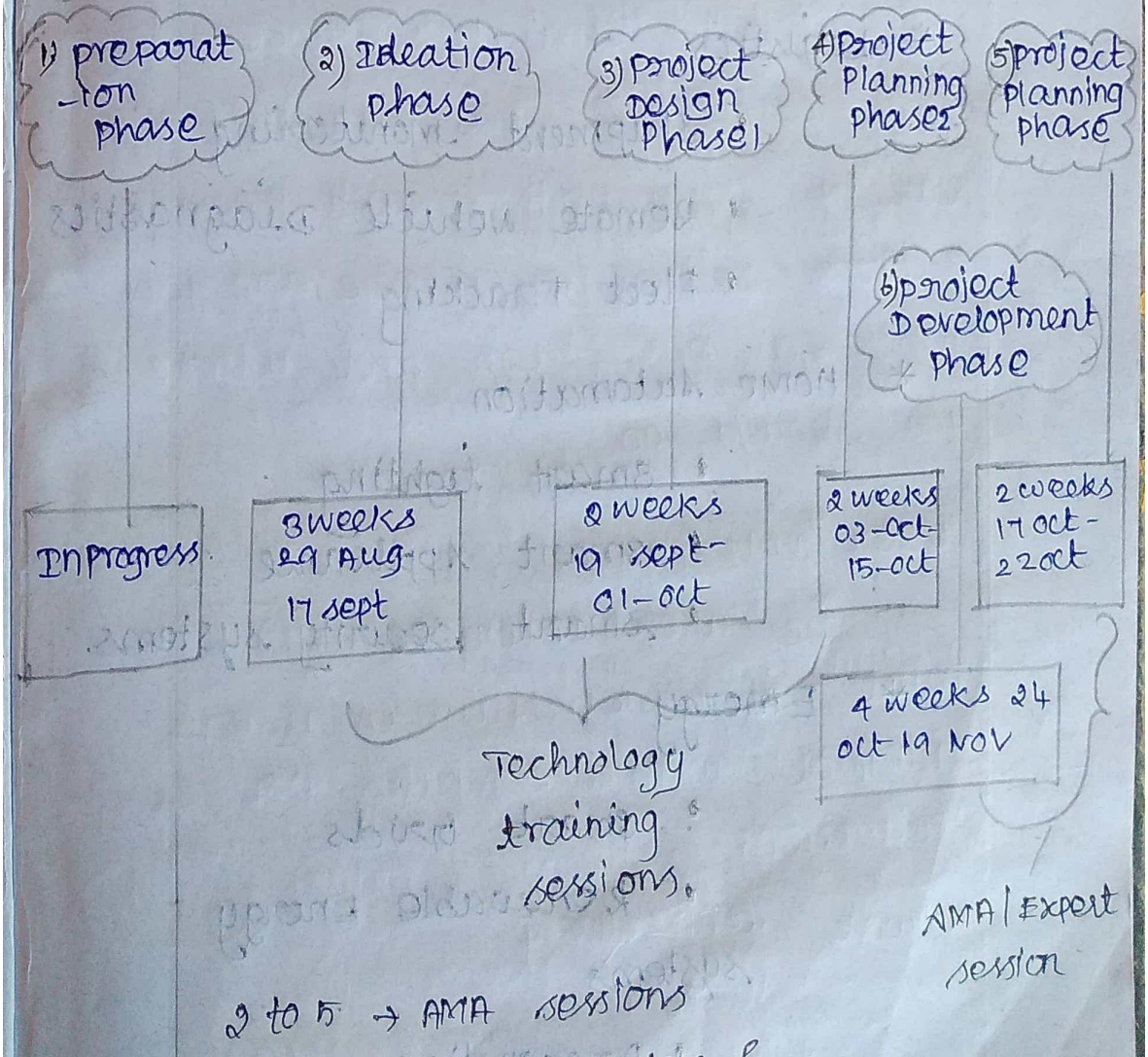
29/8/22 Training calender & Agenda session :-

Agenda :-

* Training & project calender
* Execution process
* Role of Faculty Mentor
* Role of Faculty Evaluator
* Zoom links for sessions
* Q & A

Training & project calender :-

Training & project development sessions will be organized as below



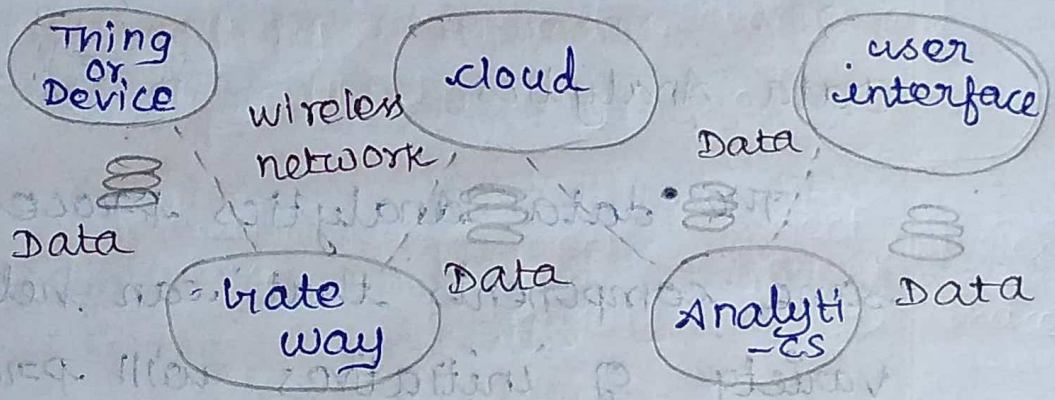
2 to 5 → AMA sessions for faculty mentors & evaluators

Applications in different sectors:-

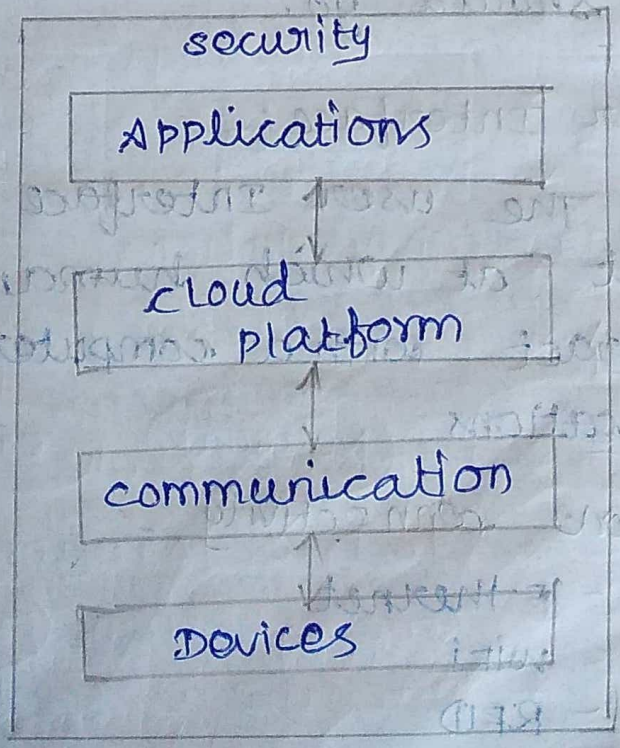
* Health & life style
  - wearable Electronics
  - Health & fitness monitoring
* Smart cities
  - Smart paking
  - Smart Roads
  - Emergency response
* industries
  - Machine Diagonsis
  - Indoor Air Quality Monitoring
* Logistics
  - Shipment monitoring
  - Remote vehicle Diagnostics
  - Fleet Tracking
* Home Automation
  - Smart lighting
  - Smart Appliance
  - Smart security systems.
* Energy
  - Smart Grids
  - Renewable Energy systems
  - Prognostics.

* Environment
  - weather monitoring
  - Forest fire detection
  - Air pollution
* Agricul Ture
  - smart Irrigation
  - Green House

Building Blocks of IOT



IOT Architecture



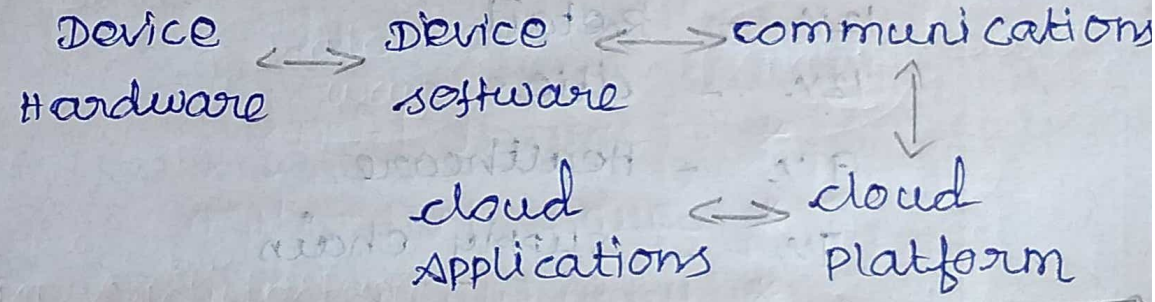
- NFC
- Bluetooth
- ZigBee
- LORA

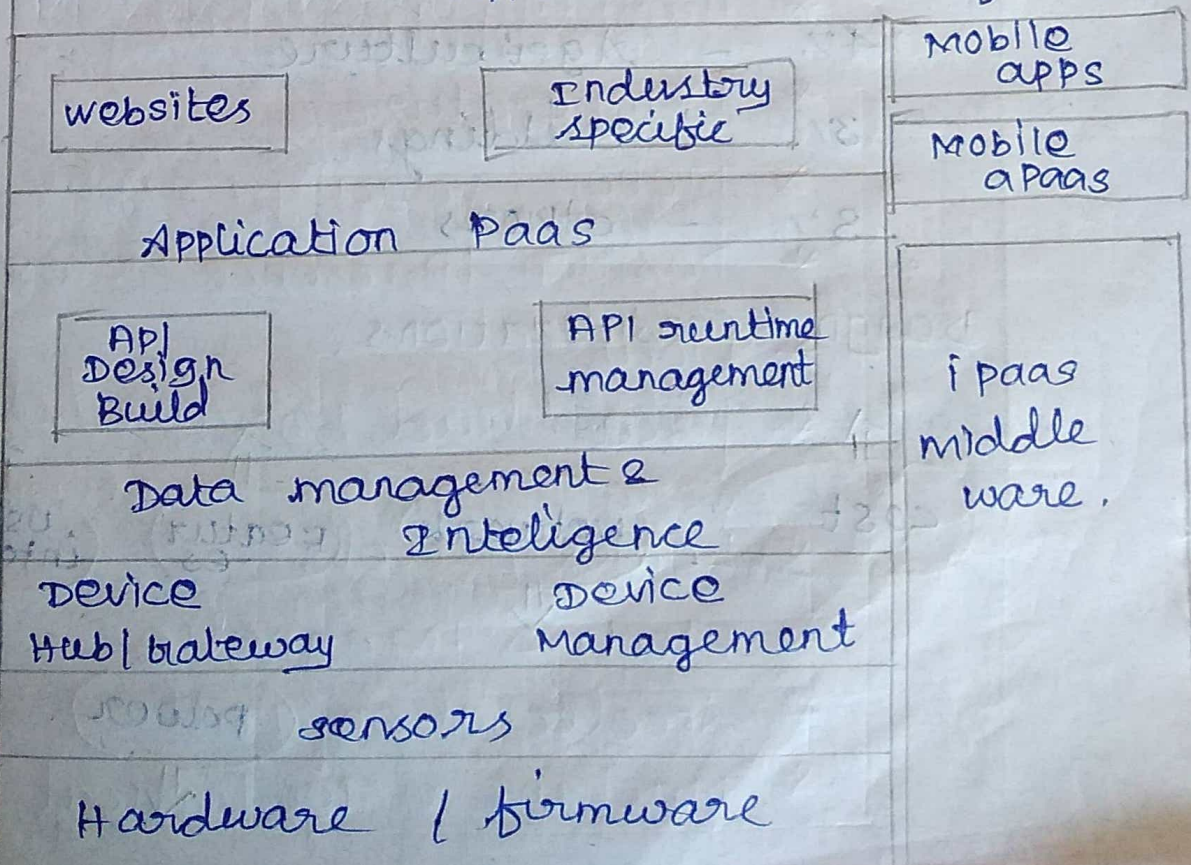
IOT security :

IOT security is the technology segment focused on security linked devices and network in the IOT.

In other words, IOT security refers to the techniques of protection used to secure internet-connected or network based devices.

IOT Technology stack :-





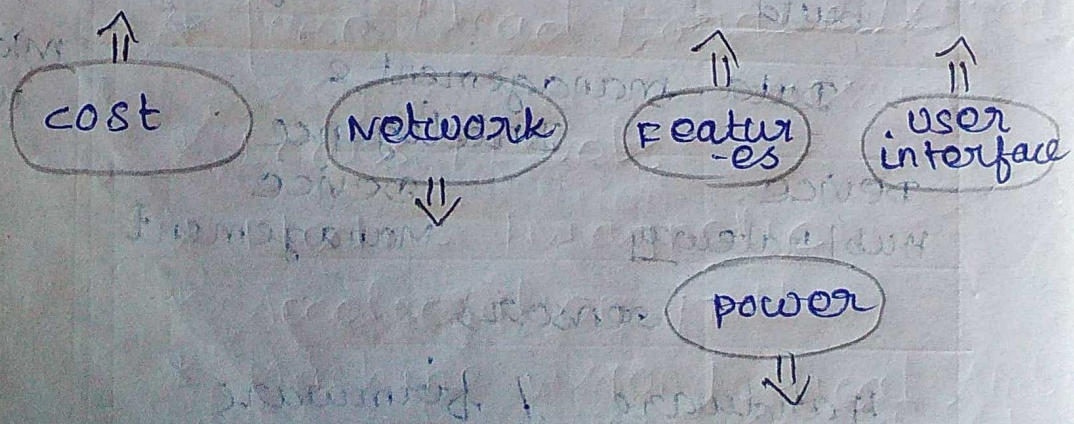
IOT Technology stack :-

- NVIDIA
- ARM AVR
- intel
- http://
- IBM watson
- Learn
- Tensorflow
- NORDIC
- django etc..

TOP 10 IOT application areas 2020

22% - Manufacturing / Industrial
15% - Transportation / Mobility
14% - Energy
12% - Retail
12% - cities
9% - Healthcare
7% - supply chain
4% - Agriculture
3% - Buildings
3% - others

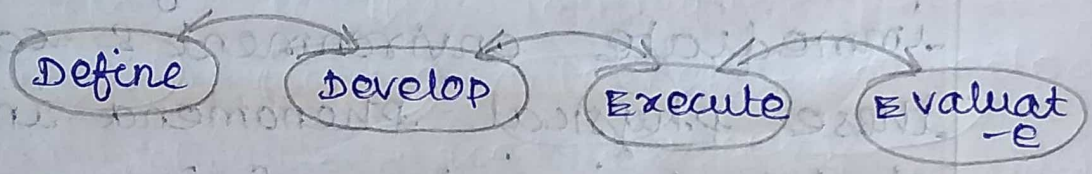
Design considerations :-



other design considerations

* Applicability
* Software updates
* support
* Data Management
* Data collection
* Analytics
* Market trends

Proof of concept (POC)



How to build a successful POC?

① Brainstorming:-

Project analysis, improvements, HW|SW requirements, communications

② Development & config:-

Build solid base on IOT platform by customizing and configuring the device.

③ Laungh your prototype:-

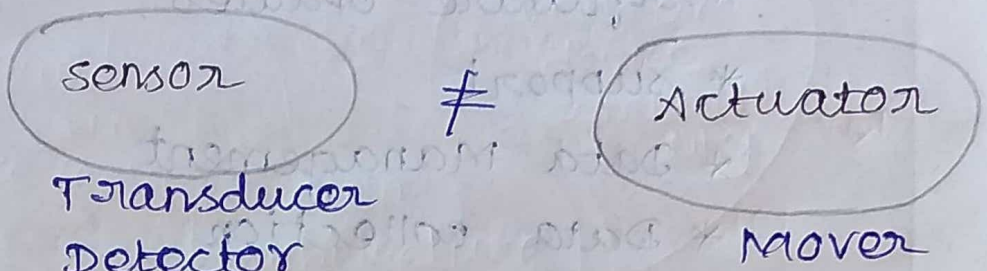
Demonstration, implementation panel creation ---- all with our support team.

④ Results Evaluation:-

Generate the reports and data which allow us to make a

comparative analysis of results.

Hardware selection:-



Sensor:-

A device whose task is to detect events or changes in its immediate environment & convert these physical phenomena into electrical impulses. [like temperature light, air, humidity, movement, Presence of chemical substances]

* chemical / Gas
* sound / vibration
* Humidity / moisture
* Temperature
* Motion / velocity / Displacement
* position / Presence / proximity
* Flow
* force / lead / torque / strain / pressure
* Leaks / Levels
* Electric / Magnetic
* Accelecration / Tilt
* Machine vision / optical Ambient light