**RFID**

**What is RFID?**

* Radio Frequency Identification, it is passive device( It means that it does not need any power supply).

**RFID Types ?**

**Passive: (No need to give power for working)**

* Low Frequency(125 MHz to 134 MHz)

(Works at 30cm or less).

* High Frequency(13.6Mhz)(works at 1mtr to 1.4mtr).
* Ultra-High Frequency(860 ~ 960 MHz)

(Works at 1mtr to 3mtr).

**Active:(we have to give power to tags using battery)**

* Ultra-High Frequency (433 MHz) Active RFID

(Works over 1 feet to 3 kilometer).

* Super High Frequency ( 2.4Ghz) Active RFID

(Works at 100 feet to 300 feet).

**Working:**

The reader is a device that has one or more antennas that emit radio waves and receive signals back from the RFID tag. Tags, which use radio waves to communicate their identity and other information to nearby readers, can be passive or active. Passive RFID tags are powered by the reader and do not have a battery. Active RFID tags are powered by batteries.

RFID tags can store a range of information from one serial number to several pages of data. Readers can be mobile so that they can be carried by hand, or they can be mounted on a post or overhead.

**Working with mobile phones:**

* In our case we make flutter mobile software to read the data from RFID.
* For that we develop a software, once we create the mobile application, when I click the scan button, our mobile worked as RFID tag reader.
* Our android application will trigger the radio frequency wave from our mobile phones.
* At the time nearby RFID tag reacts with that frequency and send it back response signal to reader antenna.
* The RFID tags will send the digitally stored value to antenna and the reader will filter the signal and find the appropriate value for RFID tags.
* And using our mobile application we get that some RFID RSSI value and save it our database for future use,
* This all done by using our python backend programmes.