

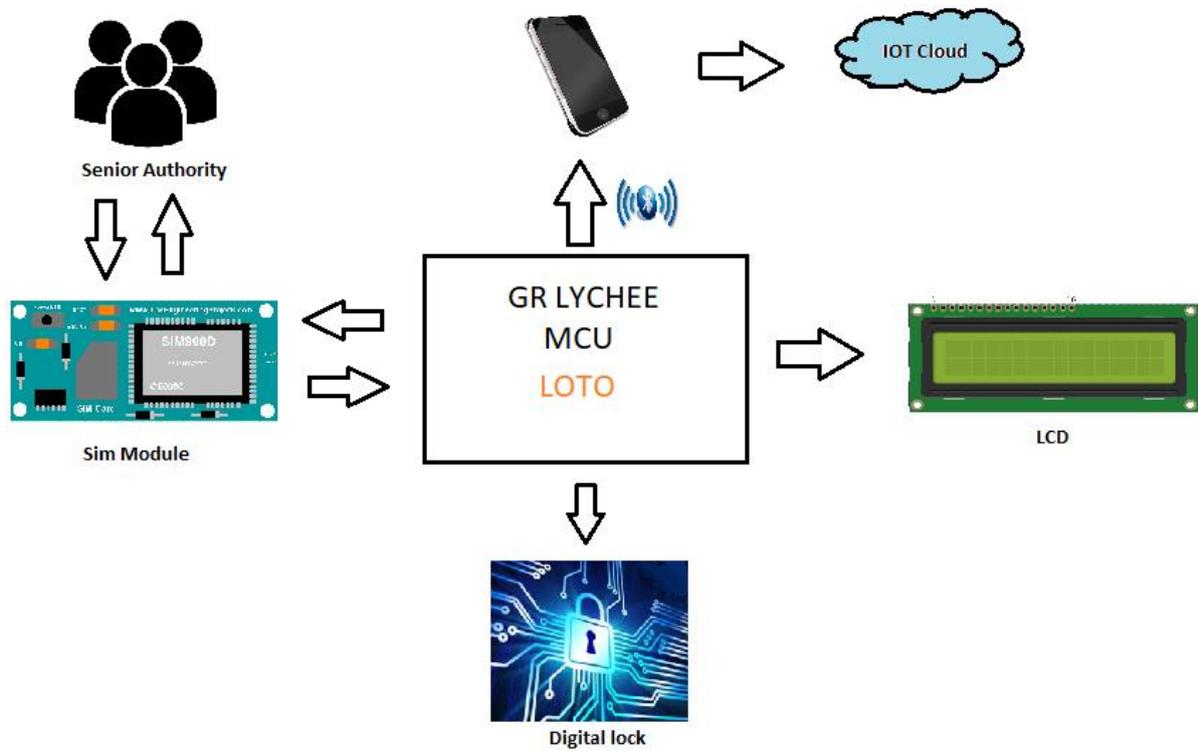
# LOTO

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**Abstract** –In India most people are employed or a part of an organization and they go for job daily. MNC's and other organization give all facilities like(health card, salary account ,etc) for their employees and Indian govt makes the strict electricity rules for industries and organization for time to time to keep a check on industries . But on the other side some industries do not follow the electricity safety rules and install cheap and local electronic systems or devices without (ISI) mark product and their electrical technician don't have proper knowledge about the systems and in that case industries have a electrical short circuit in that case technicians by pass the line and give the supply to industry without informing their senior officer and repairs are done in run time which is dangerous for life of the technicians. Every year on an average 10000 deaths occur due to the electrical shocks. Because they do not follow the industry rules ,they do not inform the senior officer and do the repair work on their own risk .According to Indian government survey 1500 deaths in Bangalore last three years , Madhya Pradesh(MP) had 1664 deaths in 2014, Maharashtra 1373 deaths in 2014. Here we have a device called (**LOTO**) Lock **O**ut Tag **O**ut after installing this device in industry on large or medium scale in case of electrical failure it will automatically cut the main supply and simultaneously inform the industry officers mainly (technician, supervisor and manager) about the short circuit and will automatically lock the panel door, no one can open the panel door without technician's permission and technician could not turn on the supply without manager's permission. Because LOTO digital lock will be accessed by only the manager who knows the pass-code.

**Introduction**-LOTO device is user friendly device which can used to prevent human life by the industrial electric shock and it's auto cut the main power supply of industry and inform the three authorised persons (Technician, Supervisor and manager) of industry via text message and device during electric short circuit it's pannel auto lock with a unique password and device wait for the repairment by the technician side during short circuit or power failure LOTO send the online current status data to the IOT cloud after follow LOTO procedure by the Technician during physical checking by technician LOTO digitally off and after repairment by the technician. LOTO give OK status on LCD after repairing the fault or short circuit technician give ok status to the LOTO device with unique password of ok status and LOTO machine send ok status message from technician side to the other two senior authority supervisor and manager .and wait for the other two ok staus password code from the supervisor and manager side . supervisor visit on the fault place and check the status screen and it also send ok status password to the LOTO device and LOTO send the ok status information to technician and manager and after supervisor ok status message manager send special password to LOTO to unlock digital power lock and LOTO will on the whole power supply. In case of repairment by technician is done after repairing the fault if LOTO not recived ok status password from senior authority it will automatically send the current status to the higher authority of industry like CEO, Chairman and Managing Director. All data out from the controller via a Bluetooth communication to smart phone and with the help of smart phone it automatically upload to the IOT cloud .and all status show on the IOT cloud in graph form in a particular field level.

## BLOCK Diagram



## Component used

- . GR-LYCHEE
- .GSM Module 900
- .LCD (16\*2)
- .magnetic lock
- . Bluetooth
- . MCB

## Picture of Prototype

