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Smart Bag

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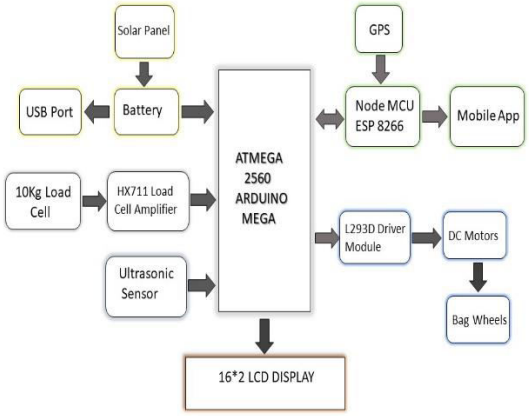
ABSTRACT: In our day to day life travelling has become one of the important aspects for human being. Generally, for travelling purpose people uses normal luggage bags or suitcase but in today's world such types of bags are not safe from the security point of view and less hard work and comfort of having better journey. Nowadays field of electronic has designed with advanced electronic technology that can provide facilities liken surveillance. All the electronic inventions are to reduce manual effort upon mechanical work and to create an interaction between human and machine. Human following bags are technologies in electronics and by utilizing its advantages and applications in day to day life in this paper we have tried to mention all the study related smart bag. Several techniques are introduced to follow bag behind the owner for the following features human detection done by ultrasonic sensors. In terms of privacy the bag can be activated by owner's identity and also location can be tracked using GPS and GSM. In this bag within a small platform all the facilities are implemented together efficiently

1. Introduction: Smart bag is designed in such a way that it is light weight luggage bag which is modified with advanced electronic technology for the purpose of advanced security system and also made the human travelling facilities more efficient with less effort. Auto trailing technology which reduces human efforts. Wherever the people travel they used to carry luggage especially to airport all of them dragging out their heavy luggage perhaps trailing of the bag is very difficult task for old peoples. If bag that follows passengers by utilizing human following concept, then entire problem get vanished. Following technique is implemented using human by sending sound waves and collects the reflected waves when it tracks an obstacle. Misplace or loosing of bag is also avoidable using proximity detection method. Beyond this it has feature of tracing the accurate position of the bag. Fingerprint locking system is used in this project Recharging port is also provided in this project. For recharging port an in used for charging of mobiles phones and laptops. data taken from ultrasonic and IR sensor. Ultrasonic sensor always measure distance between bag and tracking the bag using GPS and GSM and locate power bank is used. Recharging port mainly used for charging of mobiles phones and laptops.

2.methodology:



BLOCK DIAGRAM for SMART BAG

The proposed system uses the technique of Internet of Things in order to track the bags. In this a hardware would be created and installed which would be having the basic arduino board with a GPS module and an alarm being connected to it. A map has been created which would be synchronized in order to track the location of the bag. Furthermore, the map has the features that as soon as the bag gets lost or theft and it moves away from the owner and goes out of a particular range, the alarm would start ringing so that the owner gets notified where exactly the bag is. Also it would help the owner to track down the location of the bag which could be seen on the map as the marker would be dropped which gives us the location of the bag as it moves away from the owner. Moreover, the owner would also be notified with the flagmessages when the bag moves out of a particular range like 10m.

Step 1: attach solar panel :solar panel that will be attached on front part of the bag was decided to be of

12 volt,5 watt. The charge from solar panel is temporarily stored in a lead acid rechargeable battery of 12 volt. This voltage is converted to 5 volt.

Step 2: decision making: In our system arduino mega is main controller for decision making. we have used Arduino mega 2560 for smart bag. Arduino is a AVR microcontroller which is the brain of our smart bag.it controls all the device controlling motor drivers, NodeMcu.

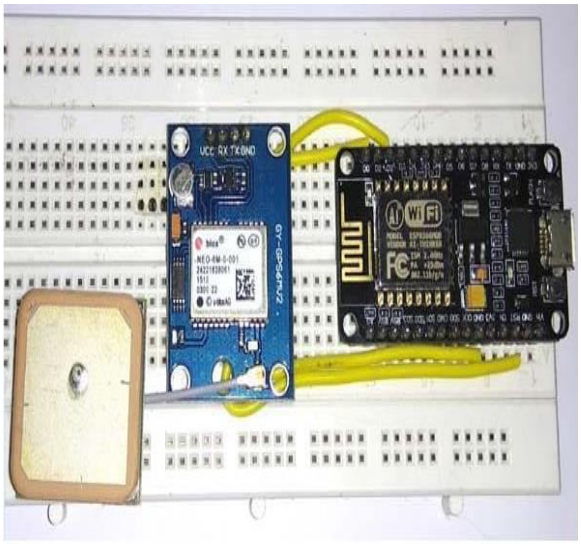
Step 3: software details: In our system we use GPS which is NEO 6m which displays the longitude and latitude of smart bag.

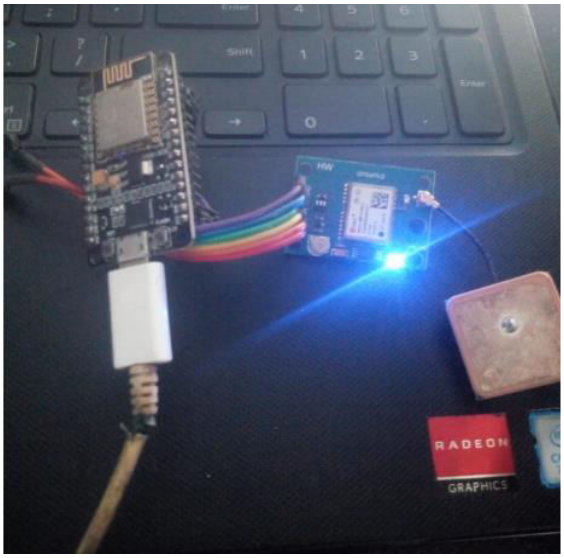
If the smart bag is lost it set distance, GPS controls and provides you to direction of bag. The GPS sends and receives the signals provided from Satellite to the node MCU.

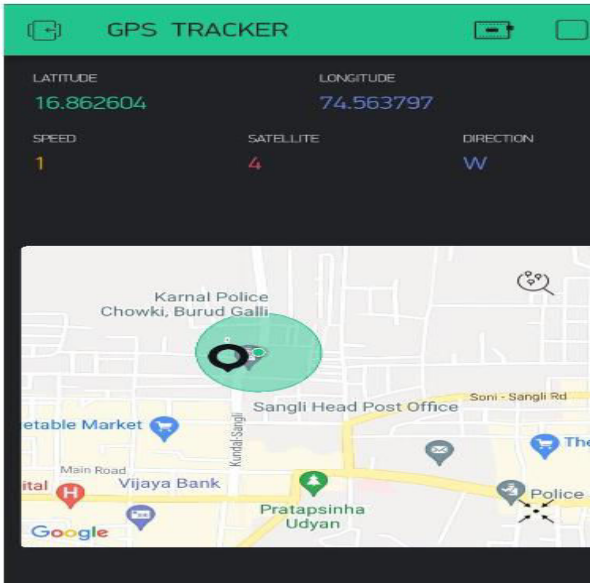
NODE MCU is the open source firmware and development kit. the output of GPS which is connected to the ESP8266 which sends and receive the signed to Arduino. simply it is an interface between GPS,Arduino the data collected from GPS is seen on mobile app.

Mobile app is used to display the data of GPS it shows actually where the smart bag is.the mobile app is used blynk app which is freely available on google play store.

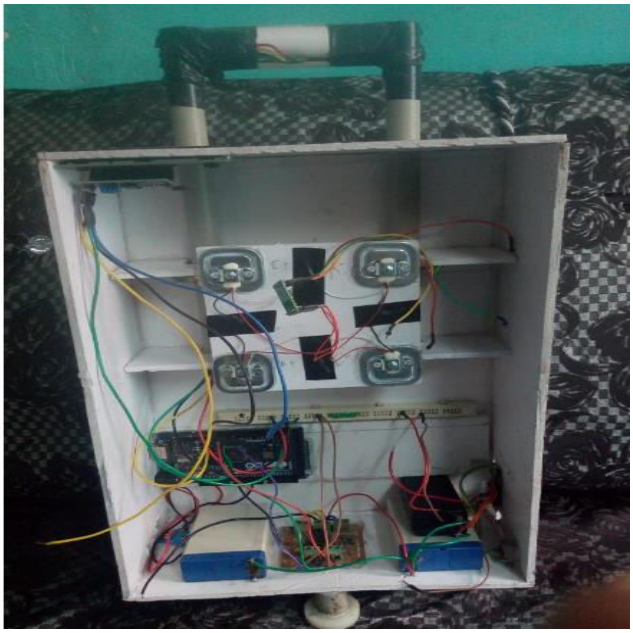
3 Hardware Component:







4 Results:



5. Conclusions: Smart luggage system makes the life easier and smoother. Carrying the luggage is main problem that can face each and every passenger during traveling. Here we try to solve manually dragging bag problem and also provide security to bag and also, we find the current location of bag with the help of GPS tracking system. The feature of smart luggage is to reduce the human efforts and provide security to the bag.

6 Future scope: The application should be more dynamic, and it should show the live feed of the movements of the luggage which Updates every time the luggage is in movements the tracking could be taken online using the could technology.The introduction of digital locks into the luggage will help the user secure the contents of the luggage with the help of Dynamic encryption algorithms and techniques which will safeguard any machine to machine communication.It comes with GSM module which helps us to triangulate its location when GPS is failed to retrieve the data .Get the status of the flights, regulation using app and pack accordingly.

7.References: [1] Madakam, Somayya, R. Ramaswamy, and Siddharth Tripathi. "Internet of Things (IoT): A Literature Review." Journal of Computer and Communications 3.05 (2015): 164. [2] https://www.arduino.cc/en/Main/ArduinoBoardUno [3] http://thegadgetflow.com/portfolio/konas-theworlds-only-trackableluggage-and-backpacks/ [4] https://flipboard.com/@anyajones2014/top-10-best-smart-luggagetracker-device-reviews-2016-5khet719y [5] https://www.trakdot.com/en/how-it-work