

Mobile Charging Using Coin Insertion

Rinu Jose*, Priya Patel, Kamini Upadhyay, Jignesh Prajapati

Computer, Vadodara Institute Of Engineering, Vadodara, Gujarat, India

ABSTRACT

This is the smart coin based mobile charging system that charges your mobile for particular range of time on inserting a coin. The system is to be used by shop owners, public places like railway stations to provide mobile charging facility. This system consists of a coin recognition module that recognizes valid coin. If a valid coin is found then the data is provided to the controller for the startup process of the relay activation which throws the 5v output with the ground connection directly to the battery of the mobile phone, now systems also needs to monitor the time duration of charging. After the condition of charge time is satisfied the system stops. Even the system ensures security and authentication services by providing security pins which are to be entered by the users. So the system can be used for smart mobile charging at public places.

I INTRODUCTION

Portable charging utilizing coin inclusion as the name proposes it is a gadget that charges versatile on the addition of a legitimate coin. This is the sharp coin based compact charging structure that charges your flexible for particular measure of time on embeddings a coin. The system is to be used by shop proprietors, open spots like railroad stations to give compact charging office. So the structure contains a coin affirmation module that sees honest to goodness coin and on its validification, it passes on the current to the microcontroller and afterward charges the portable. For the particulars for charging here we have utilized BASCOM programming dialect because of which it works in proficient way. Our venture takes the upside of Atmega16 which is an exceptionally

productive strategy to alleviate out of multifaceted nature.

II LITERATURE REVIEW

1) The target of this venture is embeddings the coin utilizing charge for your cell phone in broad daylight places. This venture is extremely valuable to individuals who are largely utilizing cell phone without charging condition in broad daylight places. In this undertaking, who are for the most part utilizing cell phones in outside of home are office without charging condition. The coin based cell phone charger is exceptionally valuable to that individual for utilizing coin to charge for that portable. The IR (infrared) transmitter is utilized to transmit IR motion in the transmitter side. The IR recipient is utilized to get the IR motion in the beneficiary

side. Between the IR transmitter and beneficiary, embed a coin to change the extremity of heartbeat in SCU input. The 555 IC is go about as a clock to produces high heartbeat for specific day and age. Driver circuit is utilized for give the adequate information voltage of hand-off. The hand-off will on to actuate the 230v charger, we will utilize charger to charge for our cell phone

2) To give control supply routinely, here they have utilized sun oriented board. This sunlight based board assimilated the light from the sun then this will create the light vitality and this sun powered charger change over light vitality into DC current for a scope of voltage that can be utilized for charging the 12v rechargeable battery

III PROBLEM EXISTING

Sun based Vitality causes some real weaknesses that incorporate the accompanying:

1. Cost

The underlying expense of buying a nearby planetary group is genuinely high. This incorporates paying for sun based boards, inverter, batteries, and wiring and for the establishment.

2. Climate Subordinate

Albeit sunlight based vitality can in any case be gathered amid overcast and blustery days, the productivity of the close planetary system drops. Sun oriented boards are reliant on

daylight to successfully assemble sun based vitality. In this way, a couple of overcast, stormy days can noticeably affect the vitality framework.

3. Sun based Vitality Stockpiling Is Costly

Sunlight based vitality must be utilized immediately, or it can be put away in huge batteries. These batteries, utilized as a part of off-the-framework galaxies, can be charged amid the day with the goal that the vitality is utilized during the evening. This is a decent answer for utilizing sun oriented vitality throughout the day yet it is likewise very costly.

4. Uses a Considerable measure of Room

The greater power you need to create, the more sun based boards you will require in light of the fact that you need to gather however much daylight as could be expected. Sunlight based boards require a great deal of room and a few rooftops are not sufficiently enormous to fit the quantity of sun powered boards that you might want to have.

5. Related with Contamination

Transportation and establishment of heavenly bodies have been related with the outflow of ozone depleting substances. There are likewise some poisonous materials and unsafe items utilized amid the assembling procedure of sunlight based photovoltaic, which can in a roundabout way influence the earth.

IV COMPARISION

Facilities	Existing solar system model	Our model based on coin insertion
Complexity	More	Less
Ease of use	Difficult to handle	Friendly
Portability	Not portable	Portable
Pollution free	Causes pollution	Pollution free

Table 1: Comparison of existing system with our proposed model [1, 2, 3, 4, 5].

V PROPOSED SYSTEM

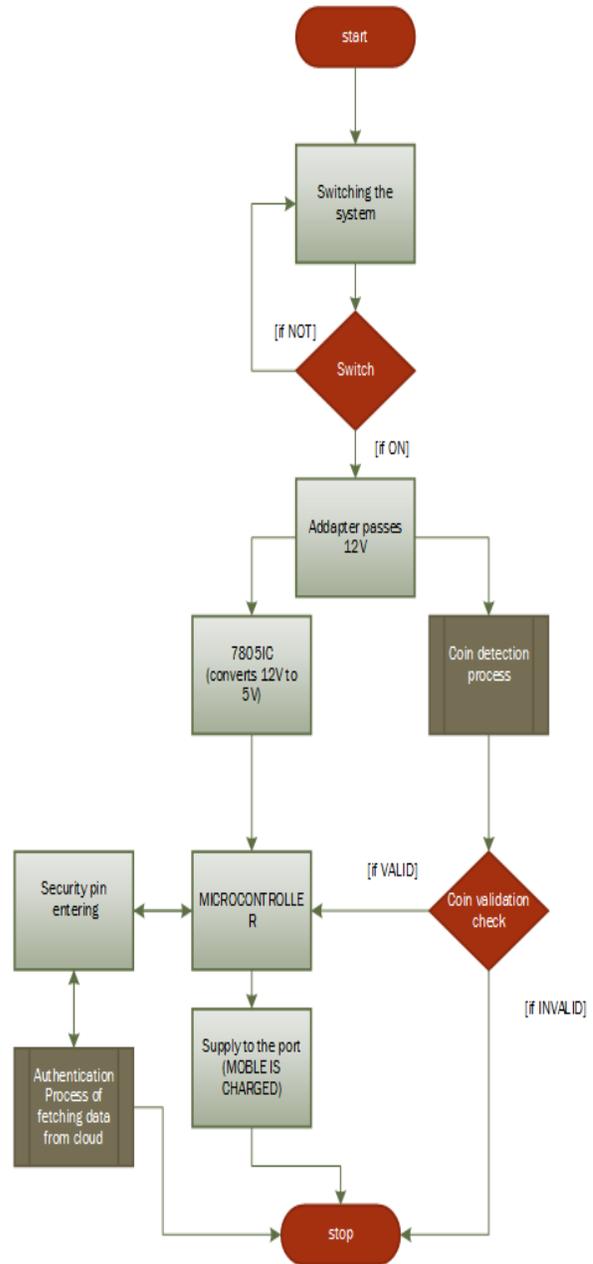


Figure1: Flow diagram of coin based mobile charging system

V(1) WORKING

On switching the system if the switch supply is on then the current is passed to the adapter

where the supply is then given to the 7805IC where the 12V supply is converted into 5V which is a suitable charging rate for a mobile to get charged. The parallel process occurring with the conversion is the coin detection process. Both the current from the IC and the coin detection mechanism if the coin, is detected is given to the microcontroller that is Atmega16 .If the validity is proved then the microcontroller switches the supply to the charging port and when the charge as per the entered coin is allotted it shut downs the system. In this way the mobile of any user can be charged easily.

V(2) SYSTEM INTERFACE DESIGN

The virtual implementation of the project is done on PROTEUS ISIS software. And the snapshots are just shown below:

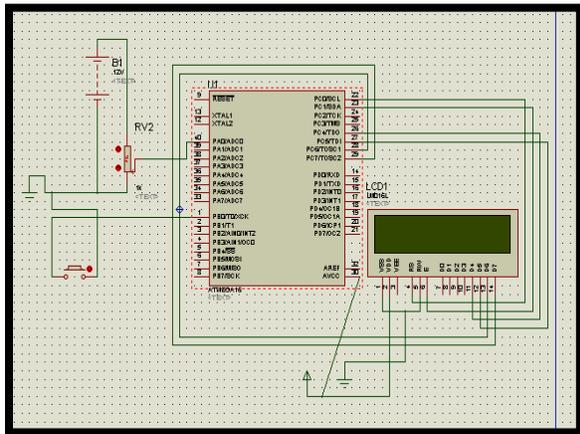


Figure2: The circuit for the operation of mobile charging

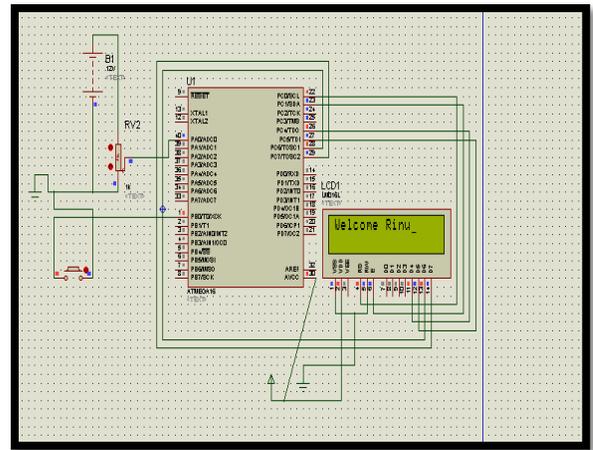


Figure3: Here on switching on to the software functioning, according to the connections set, the LCD gets on.

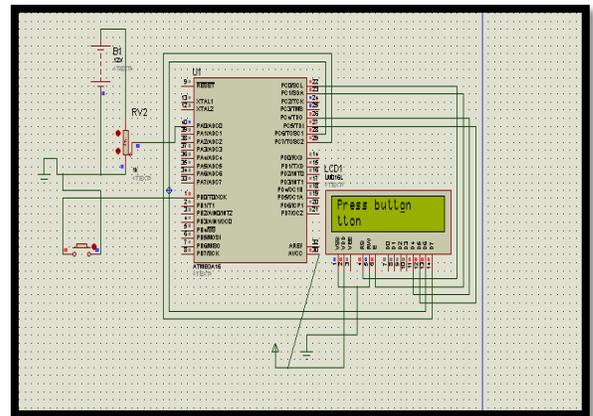


Figure4: Here the LCD displays the message to press a button so that the charging circuit can get on.

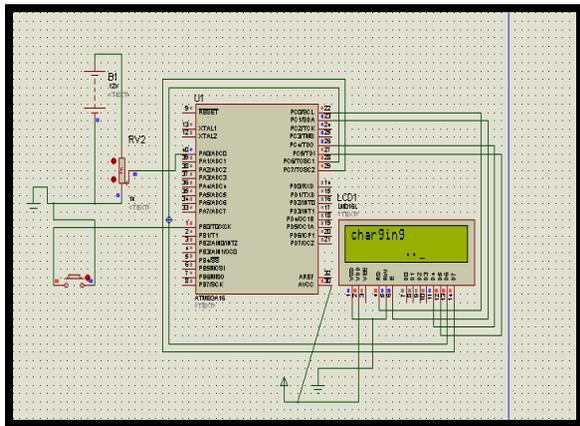


Figure5: The button was pressed and the charging circuit is on and the charging gets started. It displays the message that it is charging.

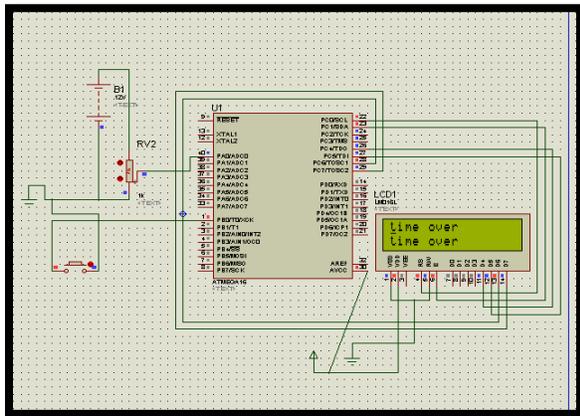


Figure6: As per the time setted till there the charging is done and then it stops charging and displays the message “time over”.

VI CONCLUSION

The project “MOBILE CHARGING USING COIN INSERTION” has eliminated the limitation of the solar panels as discussed above by taking the advantage of

Atmega16. This will be a really satisfying as well as helpful system to the users, one in need of immediate charging and is a system which can be also proposed for the better public use.

VII REFERENCES

- [1]. M.S. Varadarajan Veltech Dr. RR and Dr. SR Technical University Chennai, India “Coin Based Universal Mobile Battery Charger” IOSR Journal of Engineering (IOSRJEN) ISSN:2250-3021 Volume 2, Issue 6 (June 2012), PP 1433-1438 www.iosrjen.org ISSN: 2250-3021, www.iosrjen.org 1433
- [2]. Kalyani U. Chafle, B. M. Faruk, R. S. Shrivasa, N.S. Sawarkar Research Scholar, Department of Electronics and Telecommunication Engineering, Jawaharlal Darda Institute of Engineering & Technology, Yavatmal, INDIA “Coin based mobile charger on solar energy” International Journal Of Research –Granthaalayah Vol.3(Iss.1):January,2015 ISSN- 2350-0530(O) ISSN- 2394-3629(P).
- [3]. Quoting US patent #4937722, High efficiency direct coupled switched mode power supply: The power supply can also include crowbar circuit protecting it against damage by clamping the output to ground if it exceeds a particular voltage.
- [4]. Weidong Xiao, William G. Dunford, Patrick r. Palmer and Antoine Capel, “Regulation of Photovoltaic voltage,” IEEE Trans Industrial Electronics, vol. 54 no.3, pp. 1365-1373, June 2007
- [5]. Rodriguez, Jose; et al. (August 2002). “Multilevel Inverters: A Survey of Topologies, Controls, and Applications”. IEEE Transactions on Industrial Electronics (IEEE) 49 (4): 724-738.