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Smart Energy Management & Overload Control of Hostel Management using IOT

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Abstract: In this project we introduce energy management and automatic controlling system for hostel rooms. We see in hostel user needs to utilizes common load. But many times, some people may use extra power for their unnecessary uses like ironing, water heater, home theatres, induction etc. so common load & respective light bill may increase due to few of people and that bill have to pay by all. So, to overcome this scenario we introduce a smart energy meter which place on each room to monitor load consumption. And units of all rooms will be monitor on IOT web server. When any one uses overload equipment's then 2 warning SMS send on respective room owner mobile number. &after 3rd warning supply automatically breaks. Smart Power Monitoring and Analysis is aimed at developing a solution to keep track of every electrical appliance and monitor the energy used consumed by an Android device. As mentioned, this study's main problem statement is that most of the power meters installed in any hostel showed the total consumption of the electricity used. So, with the upcoming of machine-to-machine communication where devices can be connected wirelessly leading to IoT, we here have developed an IoT based Smart Energy Management system

Keywords: Energy Management, Current Sensors, IOT webpage, GSM-Module, Hostel Room Energy Management

REFERENCES

- [1] Tarun Kumar Singhal, Saurabh, IraVashishtha, PurviChugh2017IOT Enabled Smart Hostel: AFuturistic PerpectiveInternational Journal for Research in Applied Science & EngineerinTechnology (IJRASET), Volume 5, Issue 9, pp.1451-1466.
- [2] Abhay Kumar, NehaTiwari 2015Energy Efficient Smart Home Automation SystemInternationalJournal of Scientific Engineering and Research (IJSER), Volume 3, Issue 1, pp.9-11.
- [3] Gunjal M.S, AndhaleTejal B, DhamdhereDivya R, DusungeSujata S, KoradeRenuka D2017Online Hostel Management International Journal of Advanced Engineering and ScienceResearch (IJAES), Volume 5, Issue 1, pp.112-114.
- [4] RajanDatt, Utsav Shah, Dharmin Shah2018Student Attendance Management System UsingFingerprint Scanner International Journal of Pure and Applied Mathematics, Volume 119,pp.2273-2278.
- [5] Hnin Nu Thaung, ZawMyoTun, HlaMyo Tun2016 Automatic Energy Control and MonitoringSystem For Building International Journal of Scientific and Technology Research, Volume5, Issue 06, pp.125-129.
- [6] Sneha Sonar, Rajendra Patil2016Hostel In Out Management and Monitoring System Using RFID,Face and Thumb Recognition International Journal of Innovative Research in Science,Engineering and Technology, Volume 5, Issue 4, pp.4978-4984.Abdulla, R. (2014). A Conceptual Study of Long Range Active RFID System for Reliable Data Communication. International Conference on Frontiers of Communications, Networks and Applications (ICFCNA 2014 Malaysia), 1–6. https://doi.org/10.1049/cp.2014.1428
- [7] Abdul-Rahman, A. I., & Graves, C. A. (2016). Internet of Things Application Using Tethered MSP430 to Thingspeak Cloud. 2016 IEEE Symposium on Service-Oriented System Engineering (SOSE), 352–357. https://doi.org/10.1109/SOSE.2016.42

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[8]Al-Gumaei, W., Selvaperumal, S. K., Abdulla, R., &Nataraj, C. (2018).Smart Tree Care System with Internet of Things. Research Journal of Applied Sciences, Engineering and Technology, 15(9), 328–336. https://doi.org/10.19026/rjaset.15.5923

[9]Barman, B. K., Yadav, S. N., Kumar, S., &Gope, S. (2018). IOT Based Smart Energy Meter for Efficient Energy Utilization in Smart Grid. 2018 2nd International Conference on Power, Energy and Environment: Towards Smart Technology (ICEPE), 1–https://doi.org/10.1109/EPETSG.2018.8658501

[10]Eldemerdash, T., Abdulla, R., Jayapal, V., Nataraj, C., & Abbas, M. K. (2020).IoT Based Smart Helmet for Mining Industry Application. International Journal of Advanced Science and Technology, 29(1), 373–387. http://sersc.org/journals/index.php/IJAST/article/view/3004

[11]Energy Commission.(2017). Electrical – Final Electricity Consumption.https://meih.st.gov.my/statistics?p_auth=qBdPA2iU&p_p_id=Eng_Statistic_WAR_STOASPublicPortlet &p_p_lifecycle=1&p_p_state=maximized&p_p_mode=view&_Eng_Statistic_WAR_STOASPublicPortlet_execution=e1s1& Eng_Statistic_WAR_STOASPublicPortlet_eventId=ViewStatistic3&categoryId=4&flowId=7

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