

Flexible ATM for Cold and Hot Drinking Water and Mobile Charging

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Abstract: In this undertaking we will create framework for destitute individuals. The primary utilization of the framework is to give drinking water from 1-rupee coin. We will give various the administrations in this ATM like versatile charging, drinking water, LED lights fan or AC. Client can place coin in the framework. Framework will identify the coin and ask the administrations. Client can pick any one assistance and utilize the application. After certain time application will consequently kill. This framework used to spare vitality. Here we will give LCD to show to rule to client. LCD will show which administration is chosen from the client and term right away. We can utilize this framework in Railway station, Metro Airport and transport stand. In future we can sun powered board for framework to work without supply, likewise we can expand the numerous administrations like milk cold beverages, meds and so on.

Keywords: Information and Communication Technologies, IR sensor, Motor.

1. Introduction

With the improvement in the innovation there are many propelled gadgets and machines that are valuable to the humankind. One of them is coin worked phone. As we probably are aware its capacity and how it functions. With a similar innovation utilized we are going to structure a venture which depends on fluid (water, cold drinks). Coin Operated Water Dispensing System as the name demonstrates it depends on COIN activity. It has been uncommonly intended for use on Railway station, Bus dismisses, open spots and so forth. This framework depends on microcontroller. The contributions to the microcontroller are coin and yield as water. Taking a gander at the details required for Water Dispensing System and for straightforwardness of our application, microcontroller was seen as most appropriate. The utilization of microcontroller in any electronic gear makes it conservative and easy to use. We needed our gear helpful and modest. Processor requires less access time for fabricated - in memory and I/O Devices. At the point when we put the coin in coin box camera get the coin picture camper to database utilizing mat lab and offer sign to ARM7. Microcontroller turned on transfer and engine is on, when put the glass under the valve IR sensor is actuate gives yield as water. A candy machine is a machine that apportions things, for example, snacks, refreshments, liquor, cigarettes,

Lottery passes to clients naturally, after the client embeds cash or credit into the machine. The principal current candy machines were created in England in the mid nineteenth century and apportioned postcards. Candy machine has two capacities. These are selling the item and offer administrations to clients. Candy machine will sell the item with various kinds of items coordinated with fitting costs. In the wake of paying, the paid item gets accessible when the machine discharges it at the base of the candy machine. For the candy machine that gives administrations to the primary capacity, the administration likewise may get accessible in the wake of paying with embedded the installment. Model for the administration candy machine is the Automated Teller Machine.

2. Literature Survey

The present study bears some relationship to the previous studies conducted. These studies are given as follows:

Ushikubo (1986) invented automatic vending machines which are operated exclusively by key cards. In these machines, a magnetic card or other type of key card is employed for inducing asale. In some types of such machines, even a payment can be made using such a card. Methods of payment for purchases from automatic vending machine using a card system fall into two types; payment in advance and credit type payment. In accordance with the payment in advance method, a user purchases a card in advance for cash, which card stores data by means of a magnetizable configuration, corresponding to a given purchase price. Every time the card is used in the machine, the recorded information is appropriately changed so as to indicate the remaining credit amount. In accordance with the credit type payment method, a card holder utilizes a vending machine for a purchase using a card which has been issued to him. The amount of each purchase is stored in the machine, and the amounts debited against each card are accumulated over a predetermined period of time and are then billed to each card user at the end of that period. Its only difference is that the present study uses a coin to operate the machine rather than a card like the study mentioned. Another invention of Hart (1983), a coin operated purified water dispensing device that accurately measures and dispenses a given amount of water by hydraulic action. A pair of vertically stacked transparent pill



tubes is mounted in a cabinet in visually exposed relation of a consumer operating the machine. A water dispensing nozzle is associated with each pile tube and is protected by a shroud that is specifically configured to engage the upper portion of a container to aid the consumer in properly positioning the container to be filled. The consumer activates the machine by placing the required coins in a coin chute. Acceptance of the coins effects rotation of a rotatably mounted cam that is fixedly secured to an axial alignment with a four-way valve that in turn controls the flow of water into and out of the machine. The fill tubes are capped by end plug members having specific sealing and piston is slid ably mounted for reciprocating movement within each fill tube to effect vending of a precise volume of purified water. The previous study and the present study being undertaken are closely related since both studies show the use of a coin but they differ on the method of dispensing and on the type of fluid being dispensed since the present study vends hot coffee mixtures.



Fig. 1. Block diagram of system

3. Objectives

- The overall objective of this project is to provide safe drinking water [as per IS 10500 standards in a regular and inexpensive manner for different clusters access at 5 selected clusters with in Pachmarhi City. Different localities comprising of 1000 households with in Pachmarhi have been identified for this pilot project.
- To design and make a Coin-Operated Water ATM Machine that will dispense different water hot and cold.
- To provide a Water ATM machine which requires minimum space utilization while having large storage capacity.
- To determine what appropriate design will make the dispensing machine work in conjunction with a coin-slot machine.
- To determine the acceptability of the study in terms of convenience and efficiency.
- To determine the acceptable price per cup of the Water to the consumer.

• To be able to make an income generating project for the community.

4. Conclusion

Our aim is to deliver quality water all the time. Our Automated Plants will simplify complex operations and automatically control regular operation cycles for quality, without any dependency. Reduce maintenance and service costs of the plants without compromising the quality of water and RO plant operations. The model described in this project provides a methodology that will help the person to easily fetch the water from the system. This model utilizes a holistic approach that overcomes many of the shortcomings of previously developed models and standards while building on the significant contributions previously made. Model was developed in our project we conclude that acceptance ratio is almost 100 and vending machine works on arm controller.

References

- R. Landauer. Roadmap for 22nm and beyond. Microelectron. Eng., 186(17-19):120-128, July 2019.
- [2] Victor V. Zhirnov, Ralph K. Cavin, James A. Hutchby, and George I. Bourianoff. Limits to binary logic switch scaling a gedanken model. Proceedings of the IEEE, 9(101):194-199, 2000.
- [3] H. Iwai. Irreversibility and heat generation in the computing process. Reprinted from IBM Journal of Research and Development, 15(34):1813-1911, 1996.
- [4] C. H. Bennett. Logical of computation. IBM Journal of Research and Development, 117(63):5205-5302, Nov. 1993.
- [5] A. Berut, A. Arakelyan, A. Petrosyan, S. Ciliberto, R. Dillenschneider, and E. Lutz. Experimental verification of landauer's principle linking information and thermodynamics. Nature,4883:157-159, March 2010.
- [6] Avinash G. Keskar and Vishal R. Satpute. Design of eight-bit novel reversible arithmetic and logic unit. 5th ACM International Conference on Emerging Trends in Engineering and Technology (ICETET), pages 2227-2232, 2012.
- [7] Rakshith T. R. and Rakshith Saligram. Design of high speed low power multiplier using reversible logic: a vedic mathematical approach. EPD International Conference on Circuits, Power and Computing Technologies [ICCPCT 2013], pp. 7275-7281, 2010.
- [8] Himanshu Thapliyal and M.B. Srinivas. Novel reversible multiplier architecture using reversible tsg gate. WED International Conference on Computer Systems and Applications, pages 10-13, 2016.
- [9] Dmitri Maslov, Gerhard W. Dueck, and D. Michael Miller. Synthesis of fredkin-toffoli of networks. IEEE Trans. Very Large Scale Integr. Syst., 143(62):7615-7619, June 2015.
- [10] Tetsuo Yokoyama and Robert Gluck. A programming language and its invertible selfinterpreter. In Proceedings of the 2007 ACM SIGPLAN Symposium on Partial Evaluation and Semantics-based Program Manipulation, pp. 14-19. ACM, 2003.
- [11] James Donald and Niraj K. Jha. Logic synthesis with fredkin and peres gates. J. Emerg. Technol. Comput. Syst., 14(11):3:1-3:19, March 2018.
- [12] Fateme Naderpour and Abbas Vafaei. Reversible multipliers: Decreasing the depth of the circuit. 8th ACD International Conference on Electrical and Computer Engineering (ICECE), pages 36{39, Dec-2000. [16] L. Hong and B. D. Davison, Empirical study of topic modeling in Twitter, in Proc. ACM SOMA10, 2010, pp. 8088.
- [13] Z. Hu, H. Wang, J. Zhu, M. Li, Y. Qiao, and C. Deng, Discovery of rare sequentialtopic patterns in document stream, in Proc. SIAM SDM14, 2014, pp. 533-541.
- [14] A. Krause, J. Leskovec, and C. Guestrin, Data association for topic intensity tracking, in Proc. ACM ICML06, 2006.