

WATER BILLING MANAGEMENT SYSTEM

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1) Abstract:

Water billing system is an online project which allows the water billing management to post the bill of each and every customer and any other transactions related to water billing such as customer information, service record module, statement of accounts and all details.

The online system can be accessed by the administrators and other staff of the association and as well as the customers of the water billing. The administrator can access all the modules of the project where as the customers can only view their payment history and billing records.

Water bill goes to the customer house. This paper talk about the major findings of the challenges of the manually operated billing and payment system and suggests a possible solution that will help solve the challenges that are currently faced. The solution to above difficulties is to install prepaid water billing system which consists of smart meters. These meters shall be present in every house and each and every customer will be in position to pay for what he/she can afford and payment shall be at any time of convenience using any payment mode offline specific objectives. Analyze the existing system. To give fast and accurate access of customer. To avoid work load

2) Introduction:

A web-based water billing system is a computerized mechanism for providing water invoices to customers. This system can handle billing by sending it straight to the customer via mobile app or web, as well as handing over the bill to the customer. In order to aid the company's expansion, the proponents offered a web-based water billing system with a mobile application and a website. The system will be able to produce invoices, accept payments, compute fines, generate billing reports, and provide formal receipts. This will also serve as storage of billing information on a centralized database wherein, whenever the accounting department asked for billing reports periodically billing and collection has the ability to produce reports immediately.

Water is one of the most crucial resources that humans require in their daily lives.

Water, on the other hand, does not have the same level of management as electricity.

For water, the overall usage in a building is determined, and a single bill is generated for everyone. As a result, there is no way for individuals to prevent water waste. This results in ineffective management of the most important resource. Every user should be able to limit their water usage by understanding the situation. As a result, every customer will take water usage seriously in order to avoid extra charges. This provides you complete control over and management of your water usage. As a result, the thought occurs to me that this system should be applied in every civilization in order to minimize excessive water usage and to conserve water. Water monitoring is a crucial restriction for a variety of human uses.

Humanity has undergone significant changes as a result of the technological revolution; access to information is now available 24 hours a day, 7 days a week, and from any location. The internet, which

is a network of networks used by corporations, academia, government, and private individuals to connect and or use its services, is a gigantic information superhighway.

Water billing software also allows utility employees to focus their efforts on other duty . They can spend more time in the utility's customer service department answering resident questions they can analyze the report created by billing software to hunt for potentially costly leaks..

In this system, user will pay the amount in accordance with the usage of water. There is also automation in turn ON-OFF the water pump avoid wastage of water The statement of the issue Proper record management is of very important to each and every organization or company. Most organizations have poor record management which leads them to having so many problems during auditing. Water Board is an organization that deals with daily transaction. The bill record is used to determine success or failure, and it will be utilized to make future decisions on whether to stick with the current business organization model or switch to a new one. The manual record keeping and billing is very slow. No proper security is usually provided to the record and so can be tempered with by any personal either intentional or accidental another issue with the manual arrangement of record keeping and billing is the natural disaster. Disasters like fire outbreak can cause damages or even total vanish of all records

3) Objective:

The project's overall goal is to create a web-based water billing system. Specific goals are set.

- To provide a computer-based billing system that allows for precise bill computation.
- Managing, storing, and securing the database record.
- To provide an organized filing system with simple access to records.
- Examine the current system.
- To provide customers with quick and accurate access.

4) Types of billing:

There are two types of billing which are postpaid billing and prepaid billing.

1. Postpaid billing -:

In postpaid billing system, the customer may pay an insurance payment in advance, as well as installation or setup fees, and he will be charged (get a bill) for his usage of the service at the end of each billing cycle.

2. Prepaid billing -:

Prepaid billing allows a consumer to purchase a specific number of credits (duration, volume, or number of events) and then use the associated network resources as long as their account is in good standing. Customer usage records are received from network elements by the billing system, which adjusts customer credits. Network usage will be restricted once their credit has been used up. The term "prepaid" refers to a payment plan that has already been agreed upon.

5) Advantages and Disadvantages:

- **Advantages of billing system**

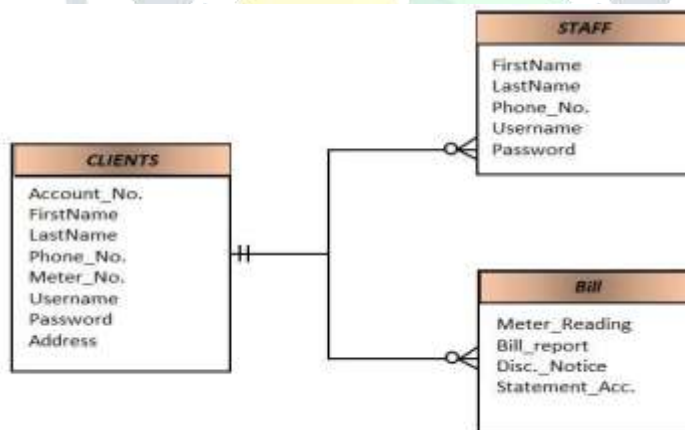
1. Real-time IVR interface with CIS database
2. Customer self-service available 24/7.
3. Access to account balances and payment history.
4. Pay bills by credit card
5. Messages that affect the entire system
6. Update Customer mobile Numbers

- **Disadvantages of billing system**

Some of the disadvantages of online bills are:

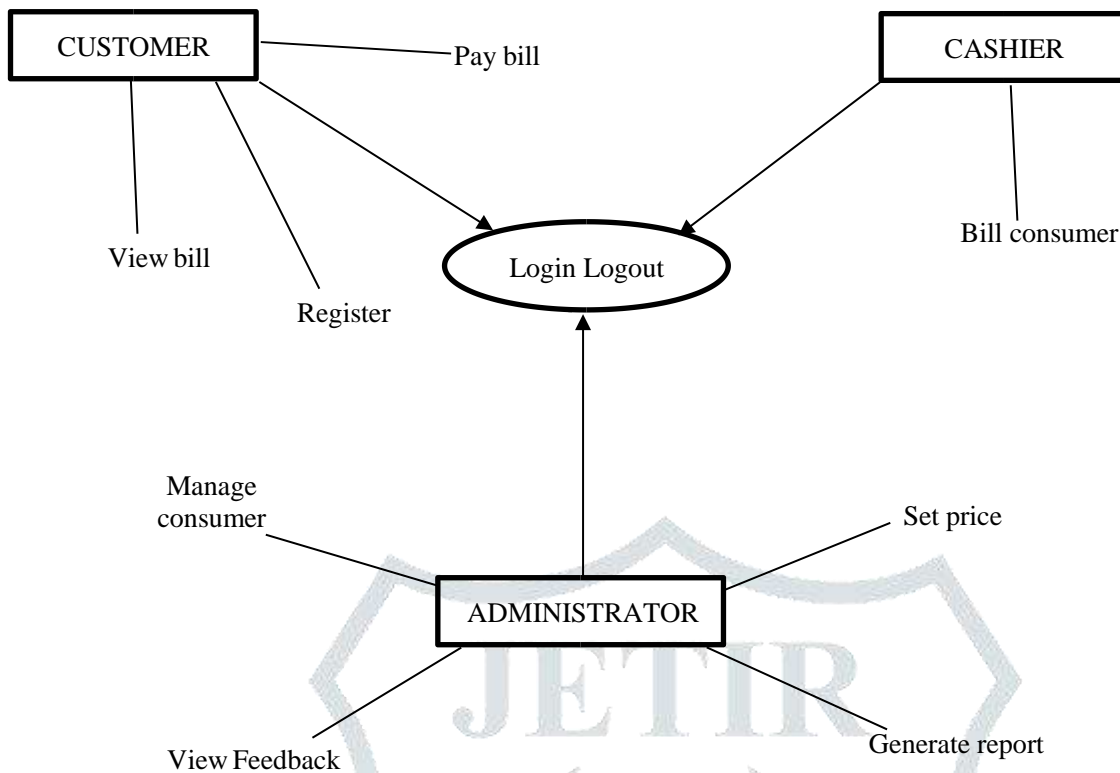
1. The slowness of the Internet and power outages is one of the major disadvantages of online billings
2. Lack of accessibility to online bills for those who do not have access to the Internet or any other kind of electronic service

6) Relationship Diagram



The Entity Relationship is depicted in the diagram above. The diagram depicts the relationship between the tables in the system. Clients, Disconnection notice, and Bill are the tables that make up the system. The lines that connect each thing can be used to establish their relationship.

7) Online billing system use case diagram



8) Conclusion

Water billing will be precise and real-time using the proposed method. In terms of cost and labor, this outperforms previous solutions. This is a sensible way for managing water bills. For water supply control, this technology is user-friendly. This allows for complete control and management of water usage. As a result, this approach can be used in any community to eliminate conflict.

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