Hospital Device Management

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Abstract- **To allow tracking, monitoring and reporting of all network-enabled hospital devices like Glucometers, X-ray machines, Cardiac equipment etc. This is can be extended to monitor almost any Wired/Wireless Biomedical Device.**

Index Terms- **purpose of the system, existing system, proposed system, architecture, modules.**

I. INTRODUCTION

To allow tracking, monitoring and reporting of all network-enabled hospital devices like Glucometers, X-ray machines, Cardiac equipment etc.
This is can be extended to monitor almost Any Wired/Wireless Biomedical Device.

1.1 Purpose of the system

The development of this new system contains the following activities, which try to automate the entire process maintaining the Hospital device records, allocation tracking details keeping in the view of database integration approach.
Proposed system is providing secure record maintenance information for Hospital Devices like Glucometers, X-ray machines etc. Maintains of Hospital Devices records instead of paperwork's we use database approach to know the information about the devices, its usage and allocation tracking details very fastly. All the information about the devices to be stored in database.
Maintenance of Individual details of devices and equipment, allocation and utilization of resources, maintenances patient to equipment ratio, Device purchase details and Inventory details is very easy to maintenance. Authentication is provided for this application only registered users can access.
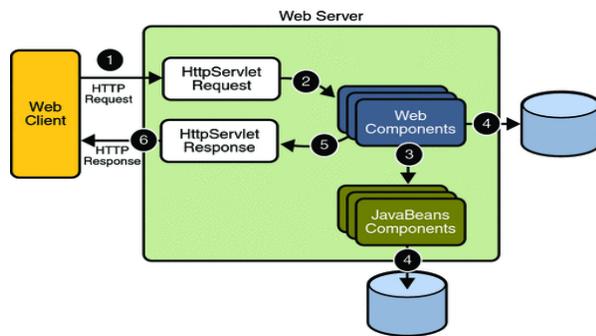This system maintains user's personal, address, and contact details. User friendliness is provided in the application with various controls provided by system rich user interface.

Report generation features is provided using to generate different kind of reports. System also tracks the device feedbacks.

1.2 Existing System

This existing system is not providing secure record information maintenance for Hospital Devices like Glucometers, X-ray machines etc. In Existing system Maintains of Devices records in paperwork's. It should be some difficult to know the information about the devices, its usage and allocation tracking details. Its time consuming process to follow this process.
Identification of anyone using (Doctors, nurses, patients) devices Maintenance of Medical record standards is difficult. The system doesn't provide facility to know monitoring, tracking and reporting. This is some difficult to estimate the future plan of medical devices how many of require and growth of the devices.
Individual details of devices and equipment, allocation and utilization of resources, maintenance patient to equipment ratio is difficult. Maintenance of Device purchase details and Inventory details is also difficult.
The system doesn't provide any facility to maintain any feedback option for Devices.

1.3 Proposed System

The development of this new system contains the following activities, which try to automate the entire process maintaining the Hospital device records, allocation tracking details keeping in the view of database integration approach.
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Maintenance of Individual details of devices and equipment, allocation and utilization of resources, maintenances patient to equipment ratio, Device purchase details and Inventory details is very easy to maintenance. Authentication is provided for this application only registered users can access.

This system maintains user's personal, address, and contact details. User friendliness is provided in the application with various controls provided by system rich user interface.

Report generation features is provided using to generate different kind of reports. System also tracks the device feedbacks.

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Advantages:

1. Optimum utilization of resources. Management of records.
2. Simplification of the operations.
3. .Less processing time and getting required information. User friendly.
4. Portable and flexible for further enhancement.

II. ARCHITECTURE DIAGRAM

III. MODULES

The project has been divided into 5 different modules:

1. Hospital employees and staff
2. Doctors and nurses
3. Inventory
4. Authentication and Security Module
5. Reports

3.1 Hospital employees and staff

Secure identification. Identification of anyone using the application per medical record maintenance standards Current device and equipment inventory and allocation tracking Maintenance.

Staff: access and authorization Future planning of current medical inventory and proposed requirements and growth.

3.2 Doctors and nurses

Details of individual devices at doctors and equipment relevant capabilities of each allocation and utilization of resources. They maintain Patient to equipment ratio. Planning true activities of Medical Devices.

3.3 User Module

Evaluate the ROI for most productive & useable assets.

Decide upon the further purchase/inventory. Inventory department maintains the all records of the hospital devices like devices Glucometers-ray machines, Cardiac equipment etc.
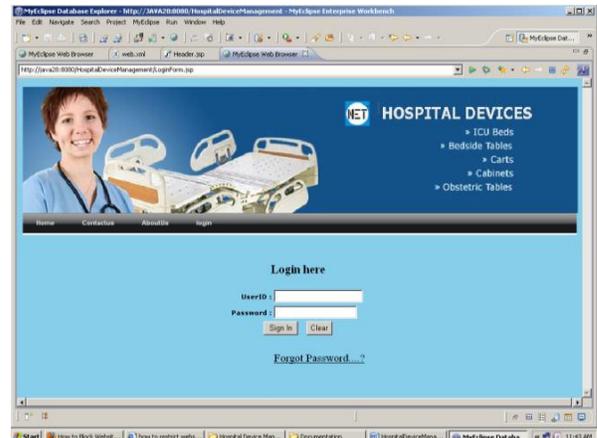
3.4 Authentication and Security Module

The user details should be verified against the details in the user tables and if it is valid user, they should be entered into the system. Once entered, based on the user type access to the different modules to be enabled / disabled and individual user can change their default password or old password.
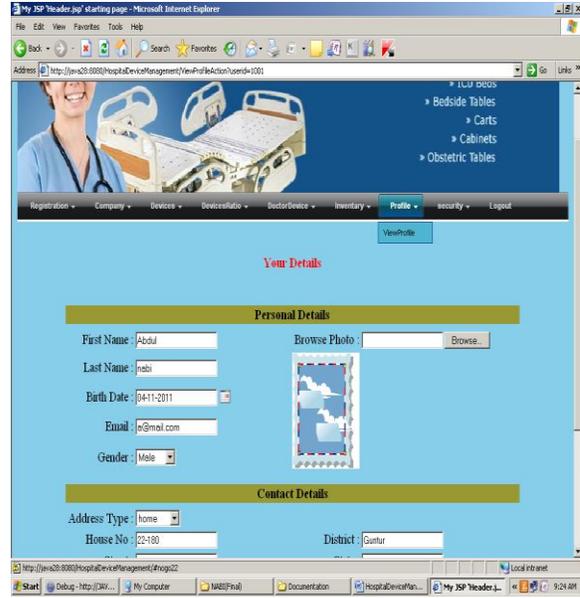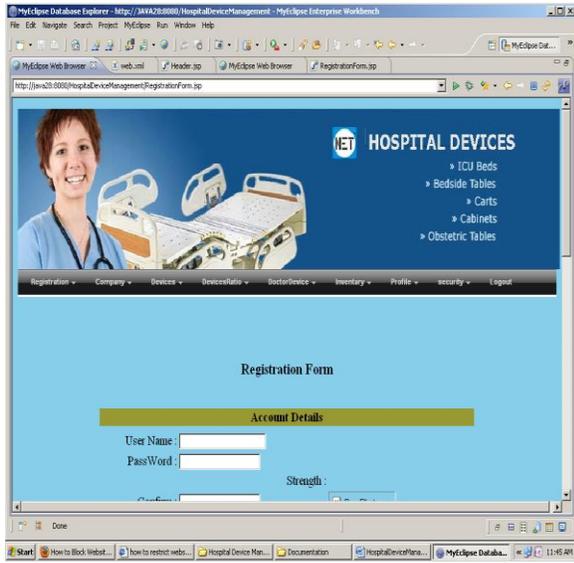
3.5 Reports

In this Module the User and Administrator can generate the different types of Reports according to their access.
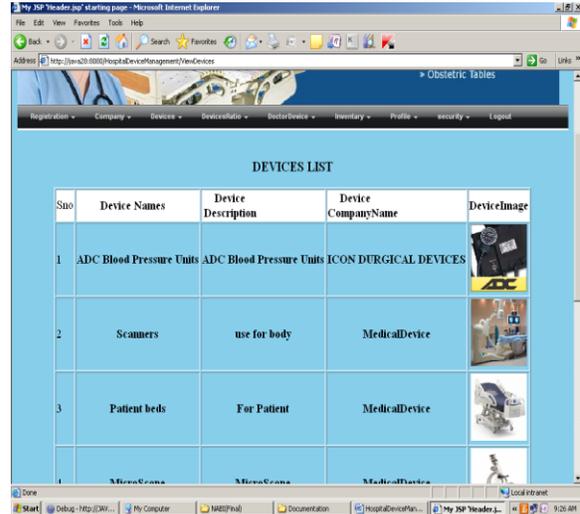
IV. SCREENSHOTS

Login page:
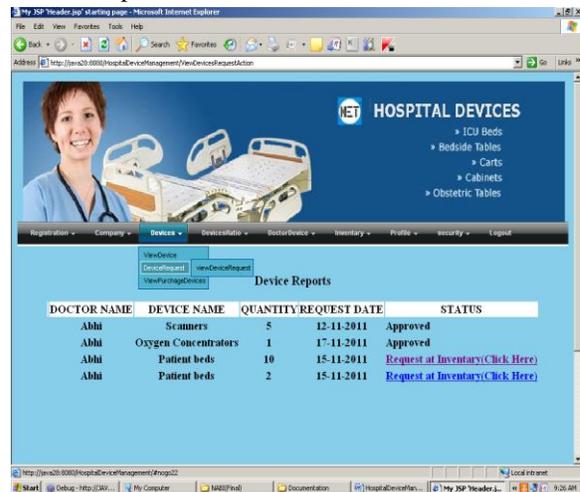
Registration form page:

Add New Devices page:

List Of Companies page:

Profile page:

Device list page:

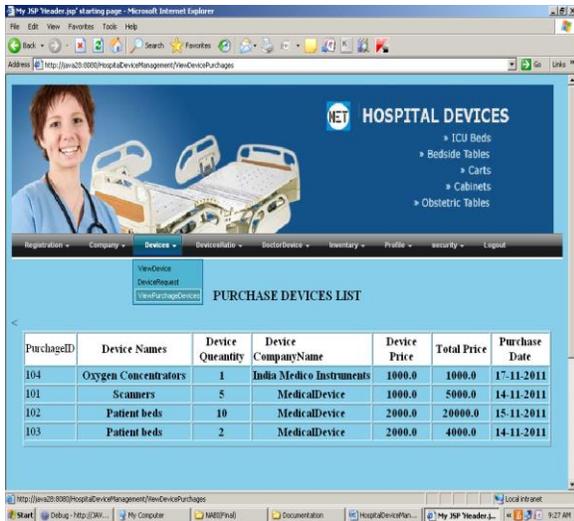Device Reports:

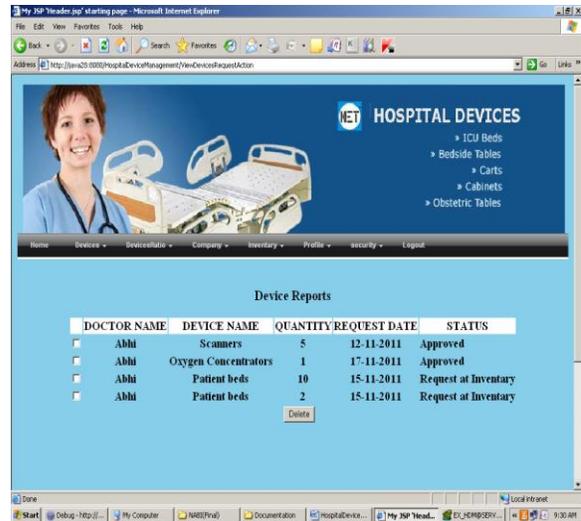Purchase Device List page:

Device Request Form:

Change Password page:-

Device Report page:

V. CONCLUSION

The Hospital Device Management was successfully designed and is tested for accuracy and quality.

During this project we have accomplished all the objectives and this project meets the needs of the organization. The developed will be used in searching, retrieving and generating information for the concerned requests.

REFERENCES

References for the project development were taken from the following books and web sites.

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[2] Database Programming with JDBC and Java by George Reese
[3] Java and XML By Brett McLaughlin
[4] Wikipedia, URL: http://www.wikipedia.org.
[5] Answers.com, Online Dictionary, Encyclopedia and much more, URL:http://www.answers.com.