Laundry Management System

Project Report

Index

ABSTRACT

We present the design and implementation of a laundry management system (LMS) used in a laundry establishment. Laundry firms are usually faced with difficulties in keeping detailed records of customers clothing; this little problem as seen to most laundry firms is highly discouraging as customers are filled with disappointments, arising from issues such as customer clothes mix-ups and untimely retrieval of clothes. The aim of this application is to determine the number of clothes collected, in relation to their owners, as this also helps the users fix a date for the collection of their clothes. Also customer's information is secured, as a specific id is allocated per registration to avoid contrasting information.

Introduction

Laundry firms currently use a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the laundry management infrastructure. Often information (on forms) is incomplete or does not follow management standards. Records are often lost in transit during computation requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the laundry firm data and may lead to inconsistencies in data in various data stores.

A significant part of the operation of any laundry firm involves the acquisition, management and timely retrieval of great volumes of information. This information typically involves; customer personal information and clothing records history, user information and retrieval period, users scheduling as regards customers details and dealings in service rendered, also our products package waiting list. All of this information must be managed in an efficient and cost wise fashion so that the organization resources may be effectively utilized.

The goal of laundry management system is to automate the management of the laundry firm making it more efficient and error free. It aims at standardizing data, consolidating data ensuring data integrity and reducing inconsistencies, through the use of highly computerized process that is stress free, reliable and quick through the use of asp.net computer programming language and SQL database application to both the users and the staff in charge of the registration and laundry management processes. HTML would be at the front-end and provide the graphical user interface that relates with the user, while the SQL database will be at the back-end to handle the data storage process.

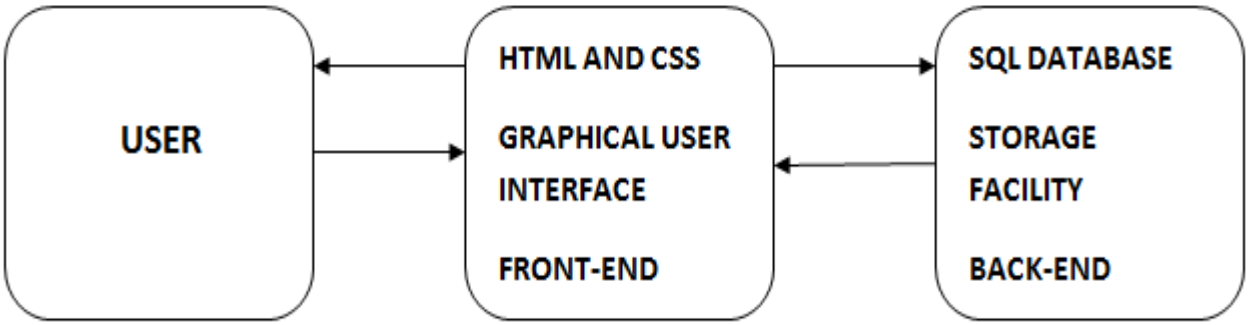
EXISTING SYSTEM

Laundry firm currently uses a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the Laundry firm management infrastructure. Often information (on forms) is incomplete, or does not follow management standards. Forms are often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. This has lead to inconsistencies in various data due to large volume of contrasting customer details leading to mix-up of clothes in the laundry firm which thus leads to delay in collecting the clothes back.

PROPOSED SYSTEM

The Laundry Management System is designed for any Laundry firm to replace their existing manual, paper based system. The new system is in form of an e-registration system to control the following; customer information, products, services, users, carts and receipt. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the delay and resources currently required for such tasks as clothes details are bounded to a particular customer with a given id. Since the existing system makes use of tedious administrative tasks, lots paper work and time, in which full information cannot be gotten from busy customers.

The goal of the laundry management system is to provide a computerized process that is stress free, reliable and quick through the use of asp.net computer programming language and SQL database application to the users and staffs in charge of the registration of customers and laundry management processes. HTML would be at the front-end and provide the graphical user interface that relates with the user, while the SQL database will be at the back-end to handle the data storage process.



The objective of this work is to implement a management system that will streamline registration process, reduce administrative tasks and paper work so as to improve the registration cycle process flow.

EXISTING SYSTEM OVER PROPOSED SYSTEM

The proposed system seeks to simplify the users operation. The stages involved in the registration process must be reduced to nearest minimum if it is to be faster and more convenient. The crude way of registration using paper based processes of registration are time consuming and expensive. The customers are rest assured security and availability of their clothing as at when due, as information are protected using a specific Id.

An increase in the number of customer will obviously mean more paper work and less efficiency of the existing system. Hence, many Laundry firms are finding the proposed system a better and more effective way of catering for the inconvenience and inefficiency of the existing system of registration. The proposed system for laundry firms plays a vital role in the transition and if effectively implemented, it should be able to:

Reduce paper work and redundancy thereby improving productivity and lowering cost of printing and purchasing registration materials annually. It aids the administrative in data management of customers, by allowing the user to search for any customer with ease.

MATERIALS AND METHODS

System Analysis and Design

System analysis is a method of problem-solving that deals with the breaking down of a system into components parts in order to study how well the individual parts work and interact to accomplish their purpose. It involves the process of enumerating the existing problems, analyzing the proposed system for costs and benefits, analyzing the system and user requirements and considering possible alternative system.

System analysis is important in the design of subsequent systems. System design consists of design activities that produce system specifications which satisfy the functional requirements that have been developed in the system analysis process. System design is basically the structural implementation of system analysis. The proposed system is being designed in such a way that users only need to input their customer data which is then entered into a computer database. Customers will be assigned a specific id on registration

Before Start Deign

To make web application for Online News Paper website it is need to select a standard PC that can support XAMPP.

Hardware Requirements

XAMPP Software installs on a standard PC system. Minimum Hardware requirements are as follows:

- ✓ Processor –Celeron (R) Dual –Core CPU T3100@1.90GHz 1.90 GHz;
- ✓ Installed Memory (RAM) – at least 350 MB;
- ✓ System type-32 bit Operating System;
- ✓ Model-Presario CQ42 Notebook PC;

  Resolution-1366/768;

Software requirements

XAMPP

XAMPP is an easy to install Apache distribution containing MySQL, PHP and Perl.

XAMPP is really very easy to install and to use - just download, extract and start.

XAMPP for Windows

The distribution for Windows 2000, 2003, XP, Vista, 7 and 8. This version contains: Apache, MySQL, PHP + PEAR, Perl, mod_php, mod_perl, mod_ssl, OpenSSL, phpMyAdmin.

Webalizer, Mercury Mail Transport System for Win32 and NetWare Systems v3.32, Ming, FileZilla FTP Server, mcrypt, eAccelerator, SQLite, and WEB-DAV + mod_auth_mysql.

- Apache 2.4.9
- MySQL10.1.31Ma

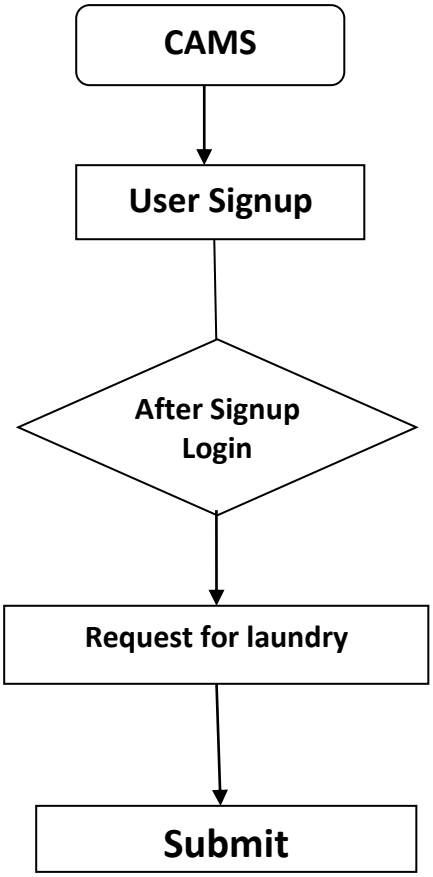
  ria DB
- PHP 7.2.3
- phpMyAdmin 4.7.9

Programming Language

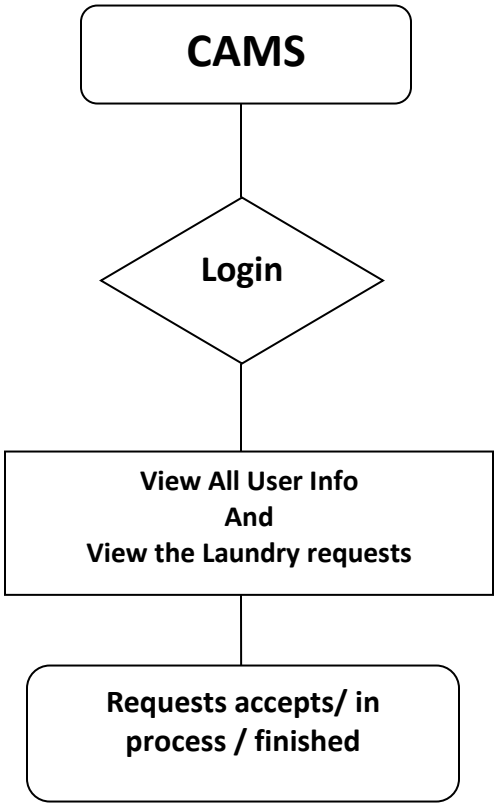
- HTML
- CSS
- JQuery
- PHP
- MySQL

FLOW CHART

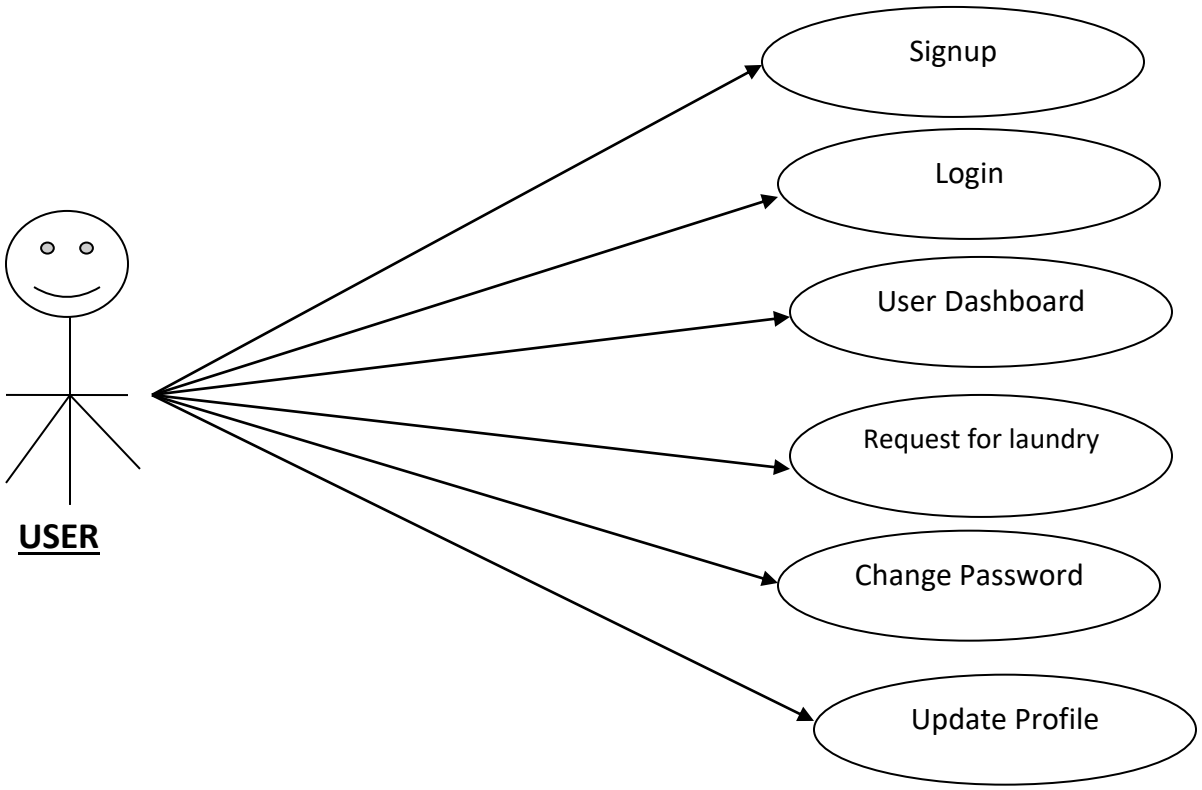
User flow chart



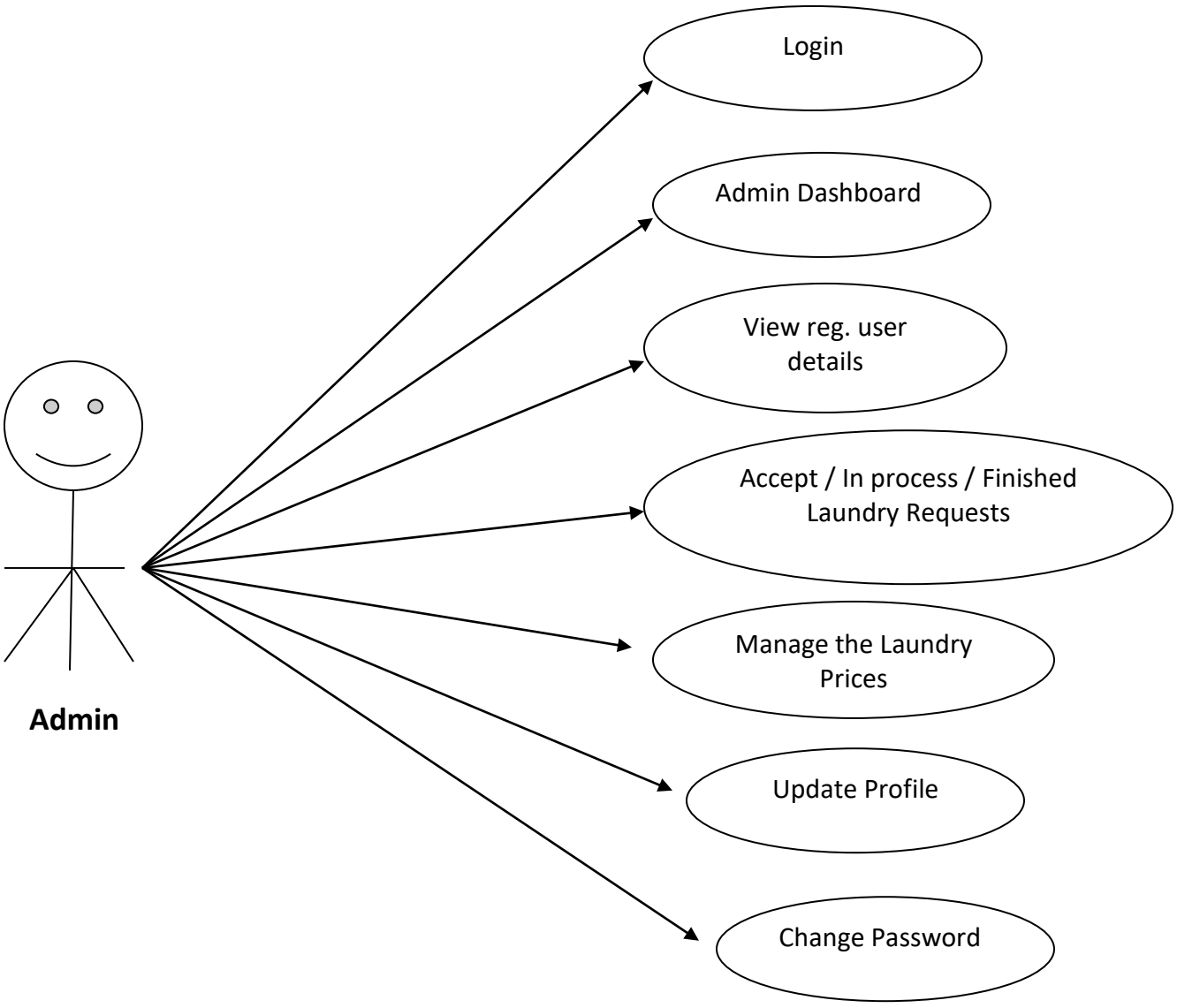
Admin Flow Chart



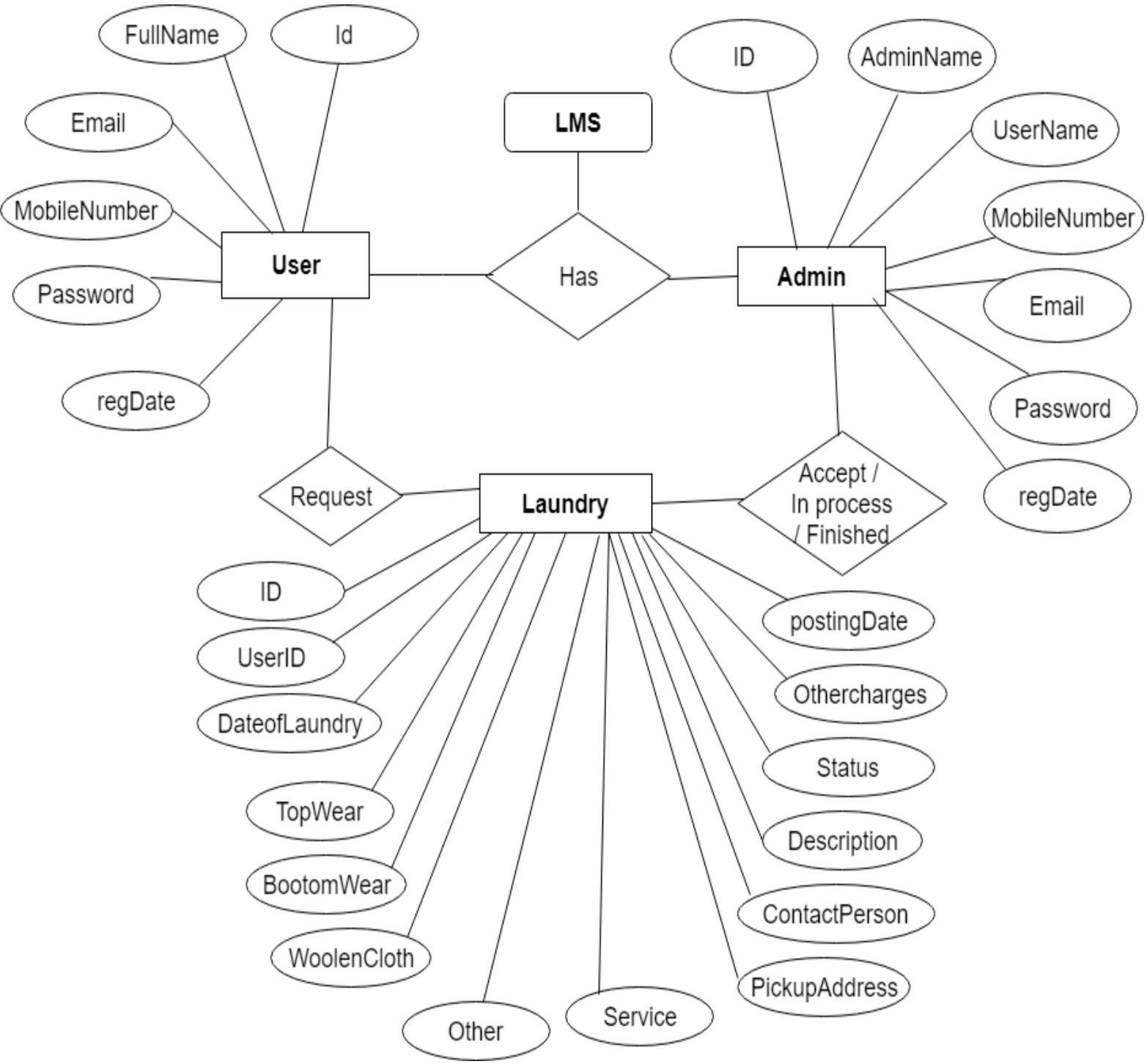
Use Case flow Diagram (User)



Use Case flow Diagram (admin)



ER Diagram


FullName
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Email
MobileNumber
Password
regDate
User
LMS
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ID
AdminName
UserName
MobileNumber
Email
Password
regDate
Admin
Request
Laundry
Accept / In process / Finished
ID
UserID
DateofLaundry
TopWear
BootomWear
WoolenCloth
Other
Service
postingDate
Othercharges
Status
Description
ContactPerson
PickupAddress

Database Design

The data in the system has to be stored and retrieved from database. Designing the database is part of system design. Data elements and data structures to be stored have been identified at analysis stage. They are structured and put together to design the data storage and retrieval system.

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective is to make database access easy, quick, inexpensive and flexible for the user. Relationships are established between the data items and unnecessary data items are removed. Normalization is done to get an internal consistency of data and to have minimum redundancy and maximum stability. This ensures minimizing data storage required, minimizing chances of data inconsistencies and optimizing for updates. The MS Access database has been chosen for developing the relevant databases.

Laundry Management System (lmsdb) contains for MySQL tables :

- tbladmin
- tbllaundryreq
- tblpricelist
- tbluser

Structure of MySQL tables :

tbladmin Table (This table contains admin login details)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(11)			No	*None*		AUTO_INCREMENT
2	AdminName	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
3	UserName	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
4	MobileNumber	bigint(10)			Yes	*NULL*		
5	Email	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
6	Password	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
7	regDate	timestamp			No	CURRENT_TIMESTAMP		

tbllaundryreq Table (This table contact all laundry request)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	UserID	int(11)			Yes	*NULL*		
3	DateofLaundry	date			Yes	*NULL*		
4	TopWear	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
5	BootomWear	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
6	WoolenCloth	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
7	Other	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
8	Service	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
9	PickupAddress	varchar(250)	latin1_swedish_ci		Yes	*NULL*		
10	ContactPerson	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
11	Description	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
12	Status	varchar(5)	latin1_swedish_ci		No	*None*		
13	Othercharges	bigint(20)			Yes	*NULL*		
14	postingDate	timestamp			Yes	CURRENT_TIMESTAMP		

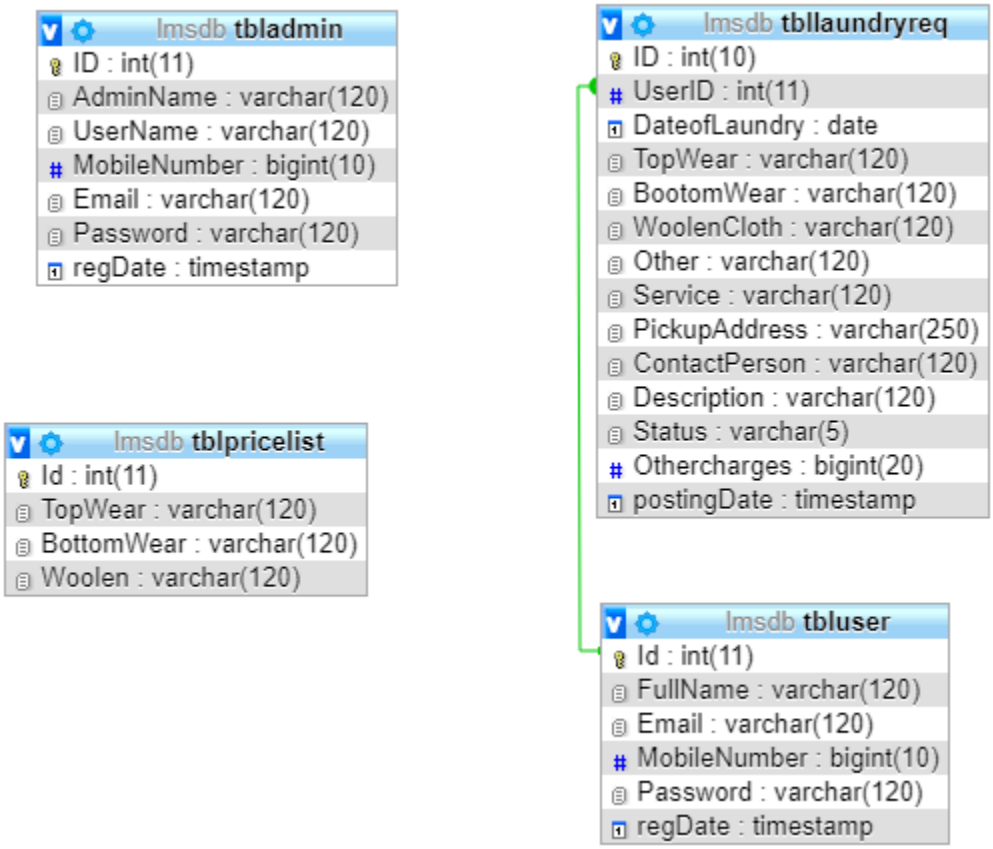
Tblpricelist (This table contains the price of the laundry)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	Id	int(11)			No	*None*		AUTO_INCREMENT
2	TopWear	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
3	BottomWear	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
4	Woolen	varchar(120)	latin1_swedish_ci		Yes	*NULL*		

tbluser Table (This table contains the user details)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**Id**	int(11)			No	*None*		AUTO_INCREMENT
2	**FullName**	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
3	**Email**	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
4	**MobileNumber**	bigint(10)			Yes	*NULL*		
5	**Password**	varchar(120)	latin1_swedish_ci		No	*None*		
6	**regDate**	timestamp			Yes	CURRENT_TIMESTAMP		

MySQL Tables Relationship



TOOLS

Programming Language

PHP

- ✓ PHP stands for PHP: Hypertext Preprocessor
- ✓ PHP is a server-side scripting language, like ASP
- ✓ PHP scripts are executed on the server
- ✓ PHP supports many databases (MYSQL, Informix, Oracle, Sybase, Solid, Generic ODBC, etc.)
- ✓ PHP is an open source software
- ✓ PHP is free to download and use

MYSQL

- ✓ MYSQL is a database server
- ✓ MYSQL is ideal for both small and large applications
- ✓ MYSQL supports standard SQL
- ✓ MYSQL compiles on a number of platforms
- ✓ MYSQL is free to download and use

CSS

- ✓ Cascading Style Sheets (CSS)
- ✓ Simple mechanism
- ✓ Easy for adding style (e.g., fonts, colors, spacing) to Web documents.

Development Models

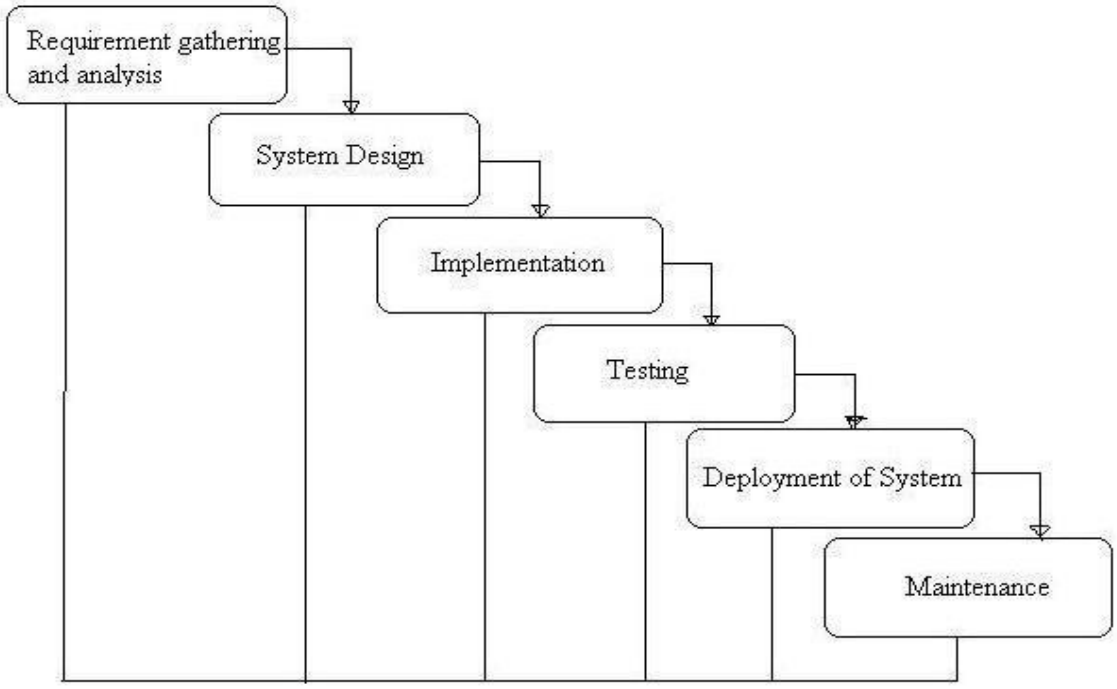
There are some Software Process Models these are listed below—

- Waterfall model
- Prototype model

Water fall Model

The waterfall model is probably the oldest and the best-known model as far as software development process models is concerned. The role of the waterfall model in software engineering is as important as its role in software testing. Of course, over the years, there are a number of other software process models which have been designed and implemented, but what is true is that a lot of them are based (in some way or the other) on the fundamental principle of the waterfall model.

On that note, let us examine the waterfall model in detail.



Waterfall Model

Advantages of waterfall model:

- Simple and easy to understand and use.
- Easy to manage due to the rigidity of the model – each phase has specific deliverables and a review process.
- Phases are processed and completed one at a time.
- Works well for smaller projects where requirements are very well understood.

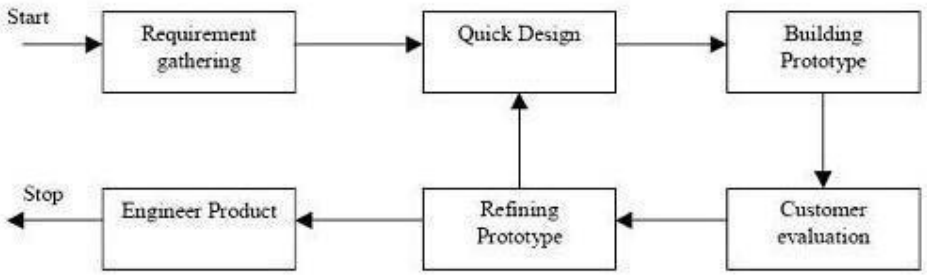
Disadvantages of waterfall model:

- Once an application is in the testing stage, it is very difficult to go back and change something that was not well-thought out in the concept stage.
- No working software is produced until late during the life cycle.
- High amounts of risk and uncertainty.

- Not a good model for complex and object-oriented projects.
- Poor model for long and ongoing projects.
- Not suitable for the projects where requirements are at a moderate to high risk of changing.
- The project is short.

Prototype Model

The basic idea here is that instead of freezing the requirements before a design or coding can proceed, a throwaway prototype is built to understand the requirements. This prototype is developed based on the currently known requirements. By using this prototype, the client can get an “actual feel” of the system, since the interactions with prototype can enable the client to better understand the requirements of the desired system. Prototyping is an attractive idea for complicated and large systems for which there is no manual process or existing system to help determining the requirements. The prototypes are usually not complete systems and many of the details are not built in the prototype. The goal is to provide a system with overall functionality.



Prototype Model

Advantages of Prototype model:

- Users are actively involved in the development
- Since in this methodology a working model of the system is provided, the users get a better understanding of the system being developed.
- Errors can be detected much earlier.
- Quicker user feedback is available leading to better solutions. Missing functionality can be identified easily
- Confusing or difficult functions can be identified Requirements validation, Quick implementation of, incomplete, but functional, application.

Disadvantages of Prototype model:

- Leads to implementing and then repairing way of building systems.
- Practically, this methodology may increase the complexity of the system as scope of the system may expand beyond original plans.

- Incomplete application may cause application not to be used as the full system was designed Incomplete or inadequate problem analysis.

When to use Prototype model:

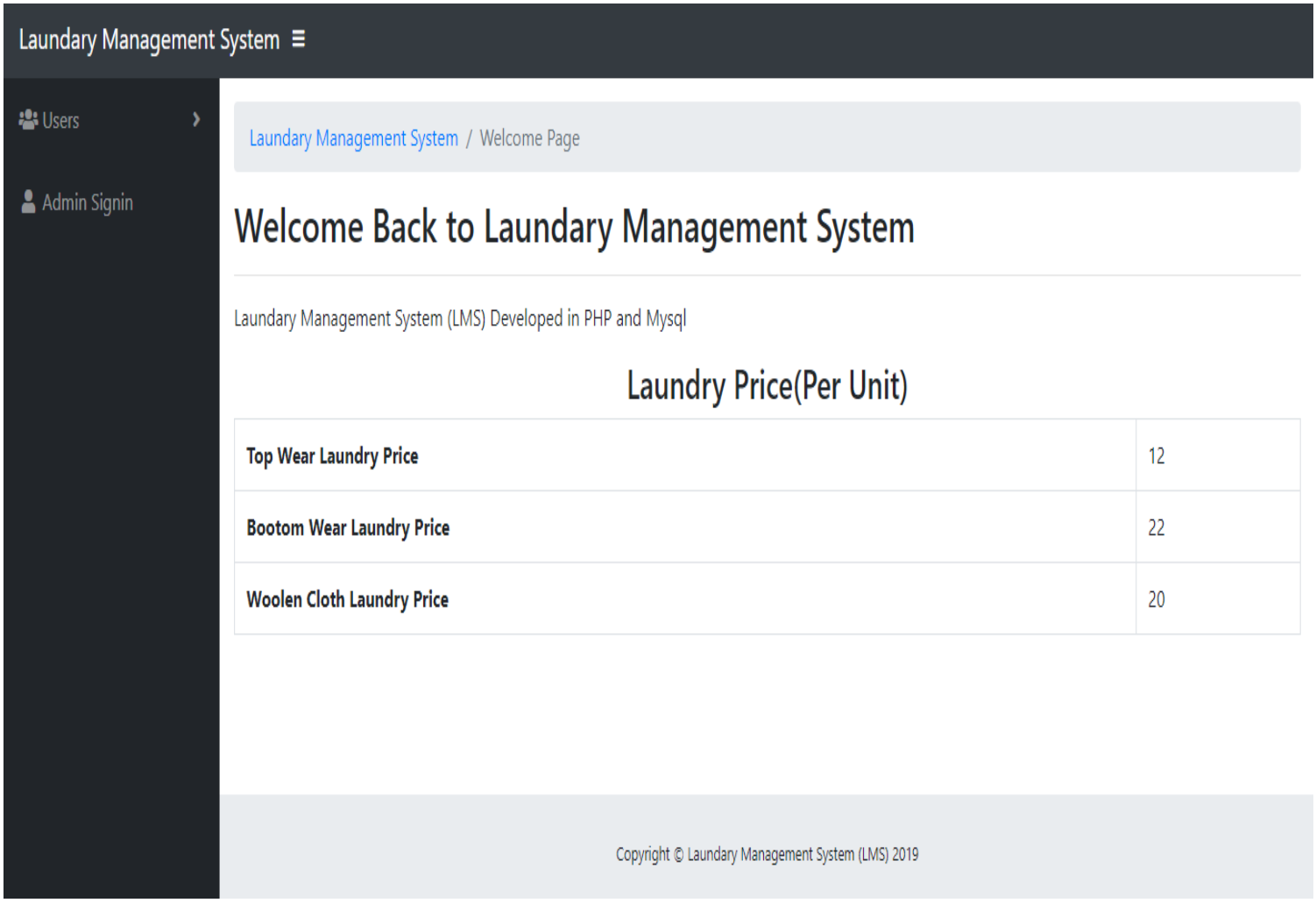
- Prototype model should be used when the desired system needs to have a lot of interaction with the end users.
- Typically, online systems, web interfaces have a very high amount of interaction with end users, are best suited for Prototype model. It might take a while for a system to be built that allows ease of use and needs minimal training for the end user.

- Prototyping ensures that the end users constantly work with the system and provide a feedback which is incorporated in the prototype to result in a useable system. They are excellent for designing good human computer interface systems.

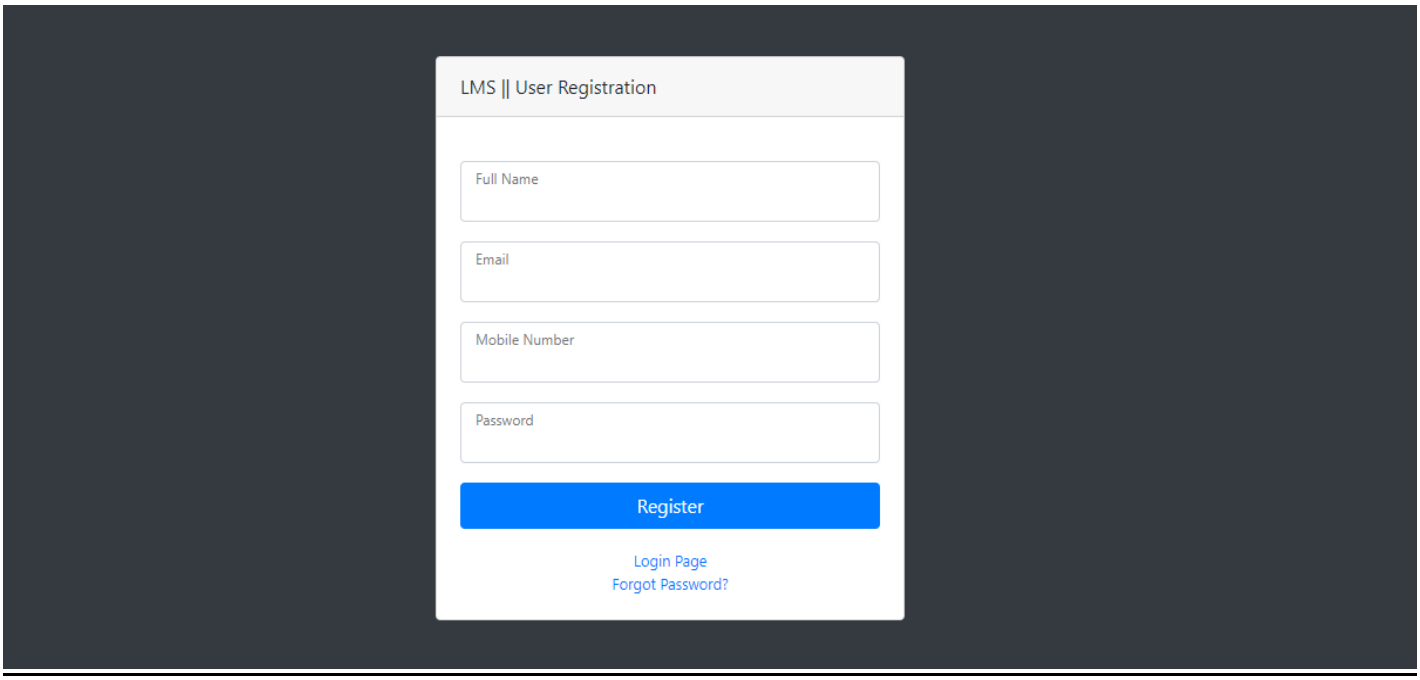
DESIGN IMPLEMENTATION AND RESULTS

Design implementation refers to the real live running of the designed program. This section consists of the program modules, showing what they do, and how the system can be deployed.

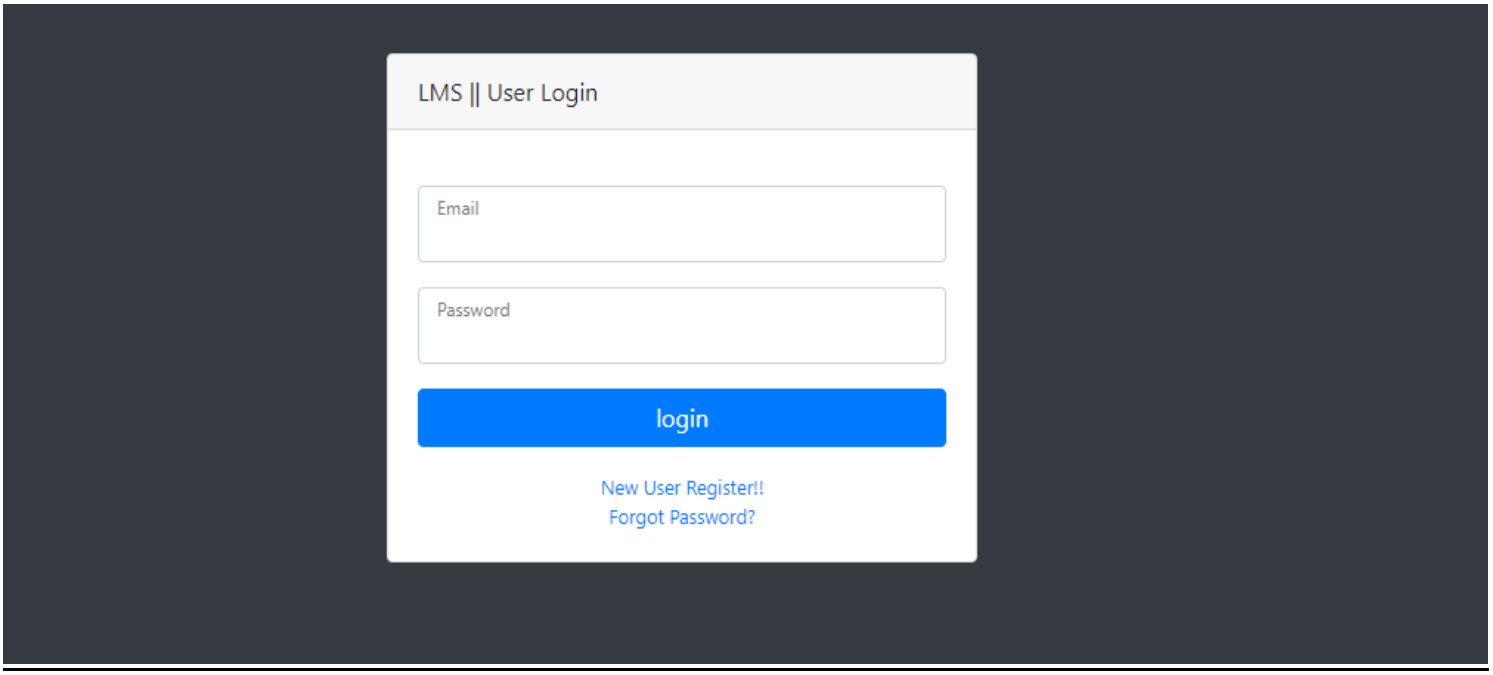
Home Page



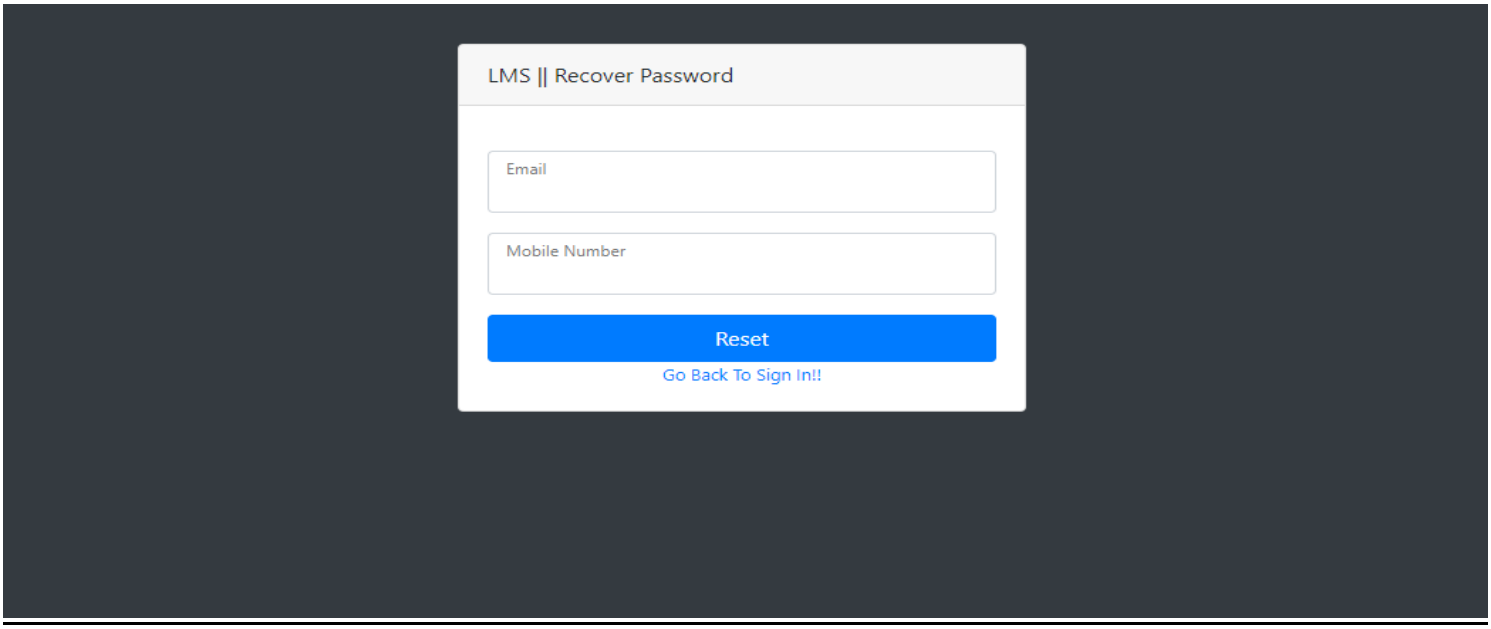
User Signup



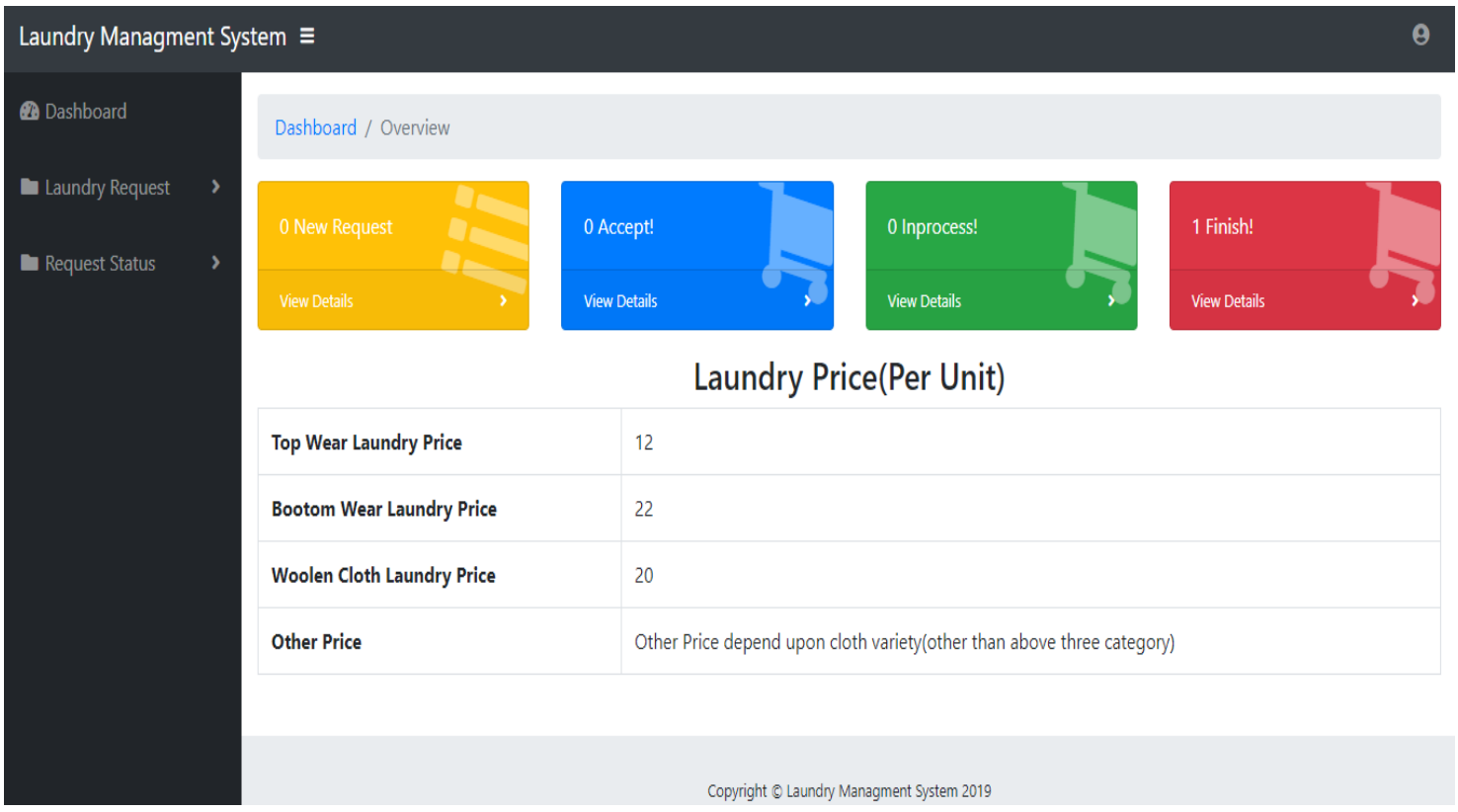
User Login



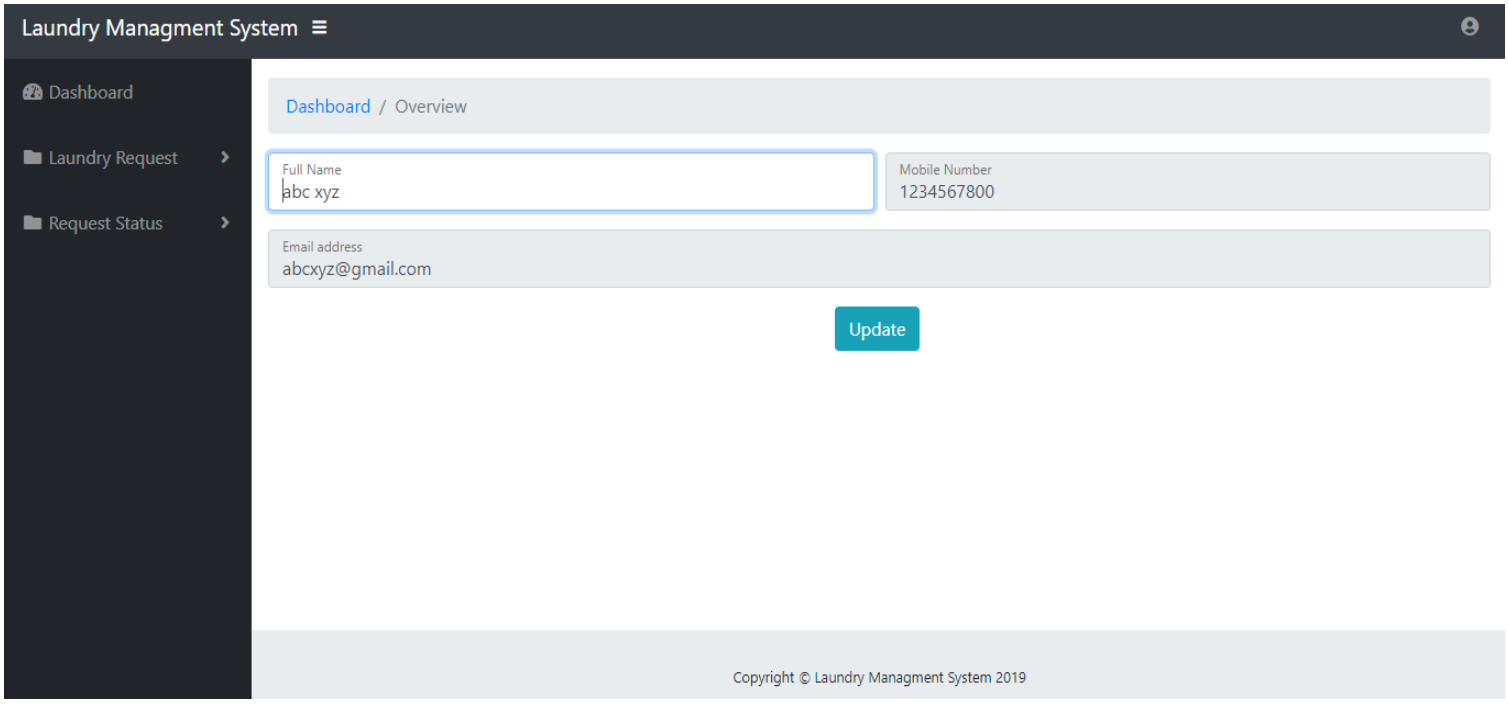
User Forgot Password



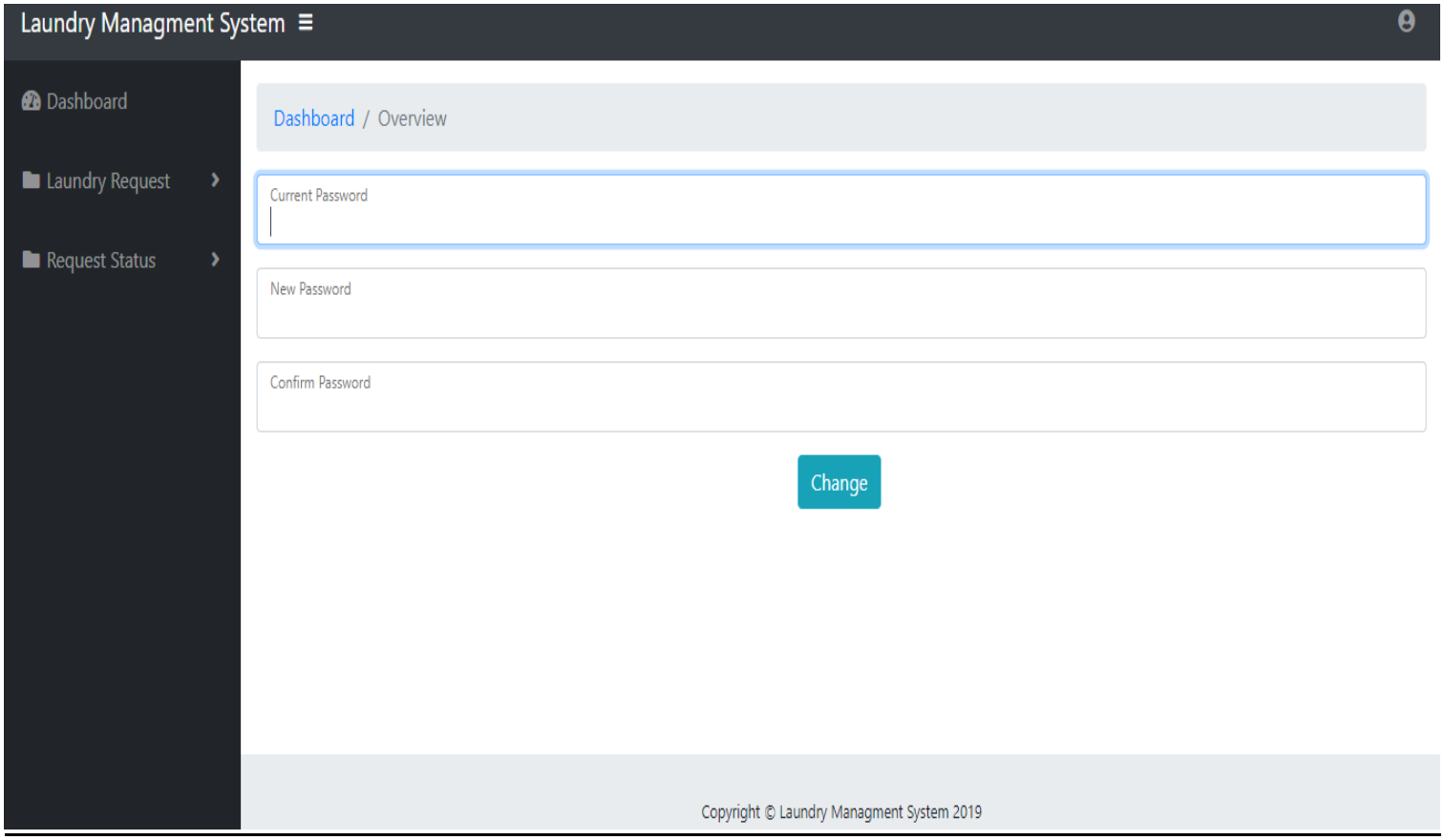
User Dashboard



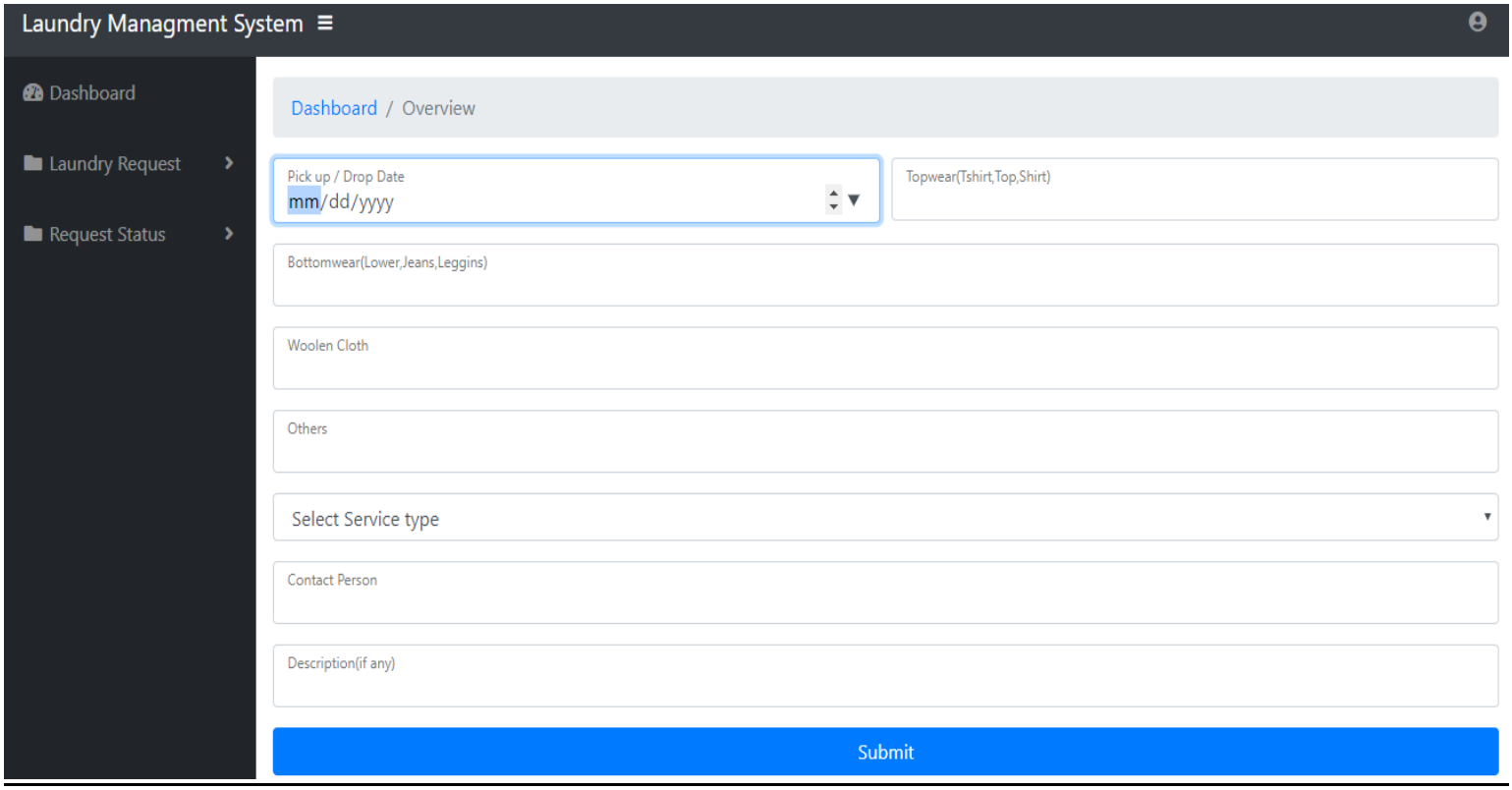
User Profile



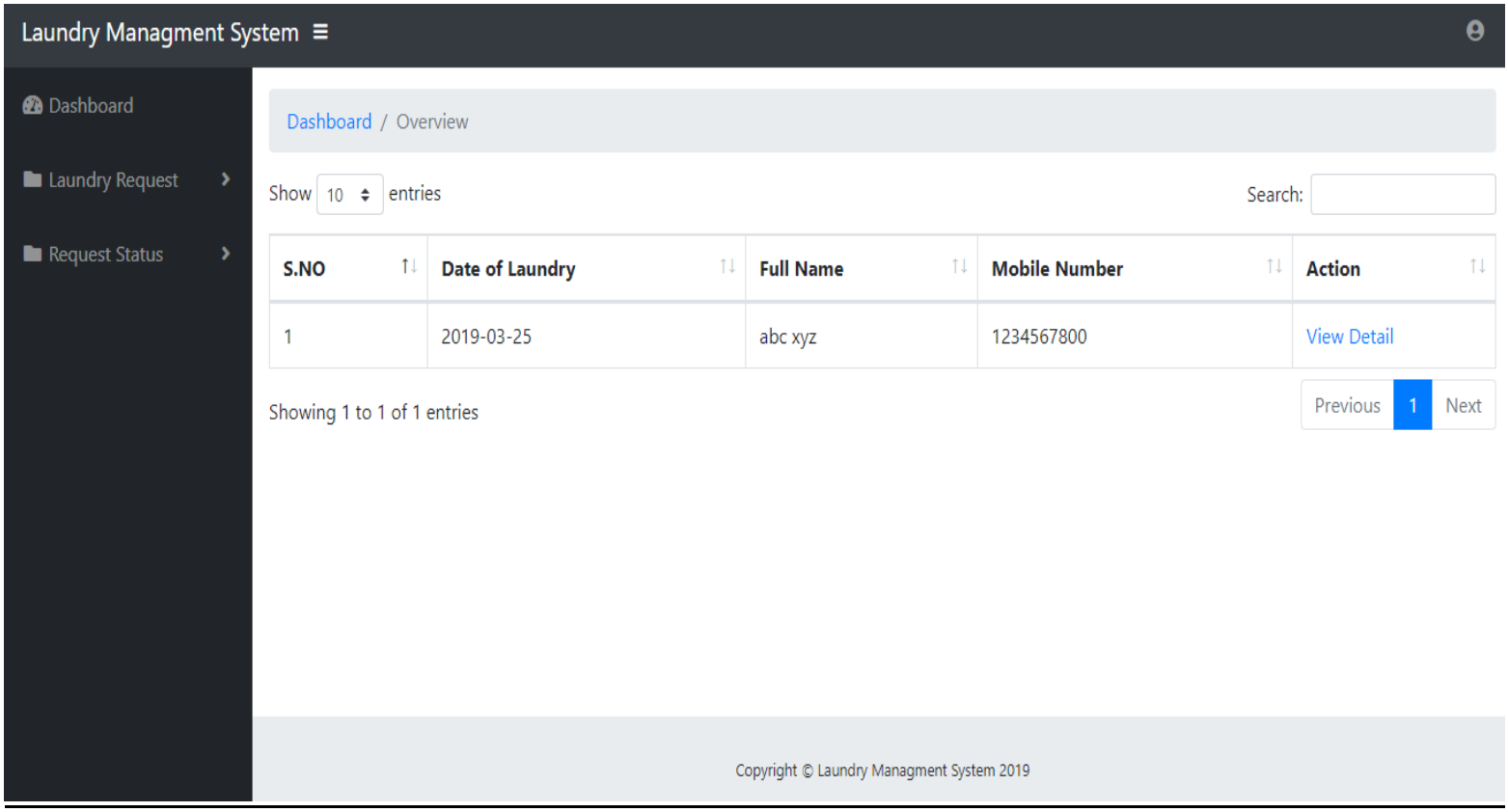
User Change Password



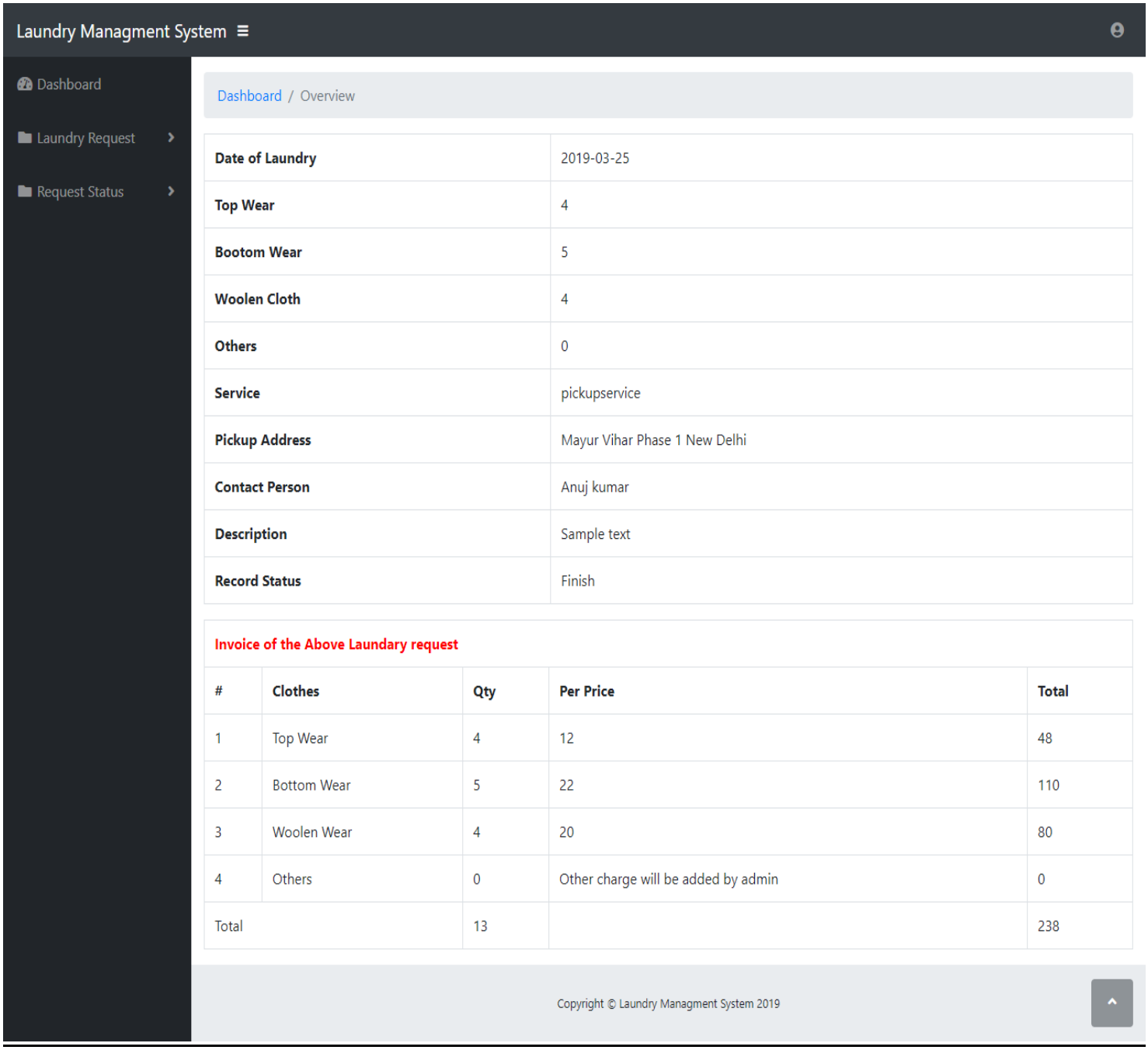
User Laundry request form



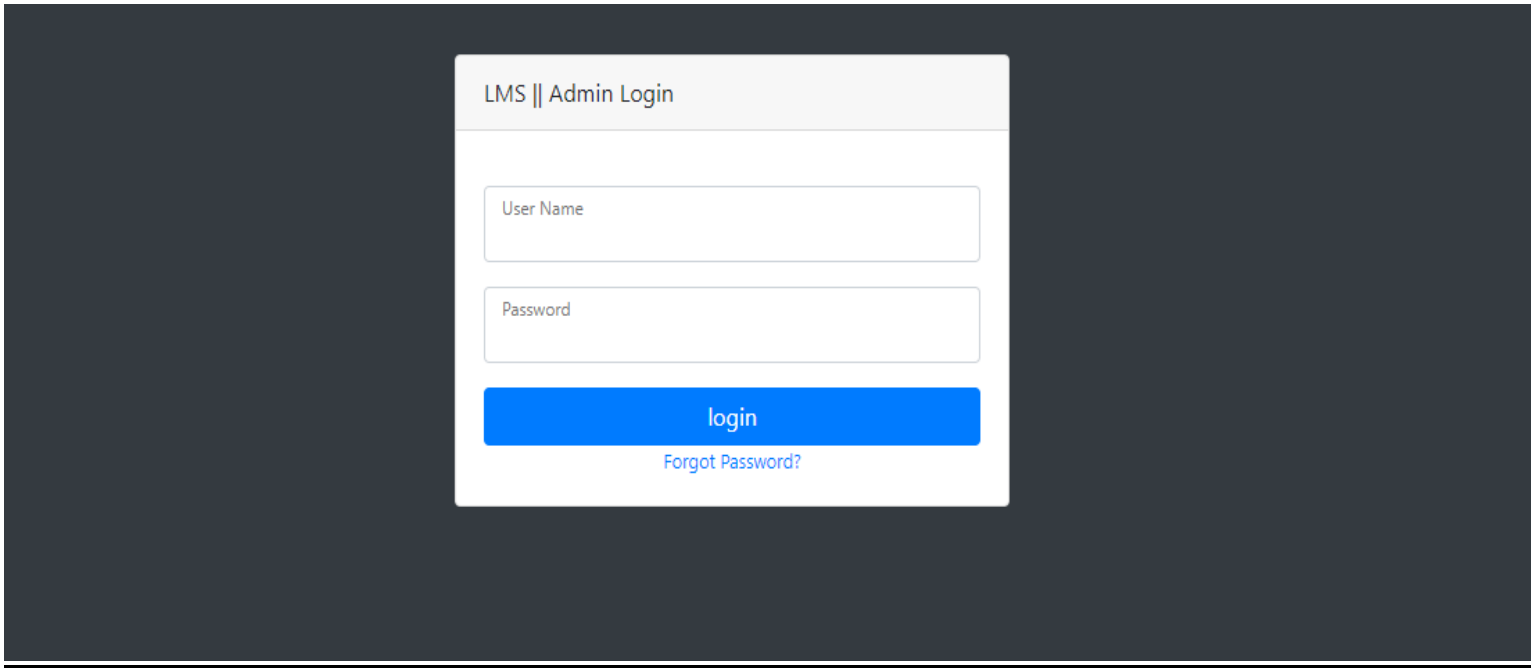
User Laundry Requests



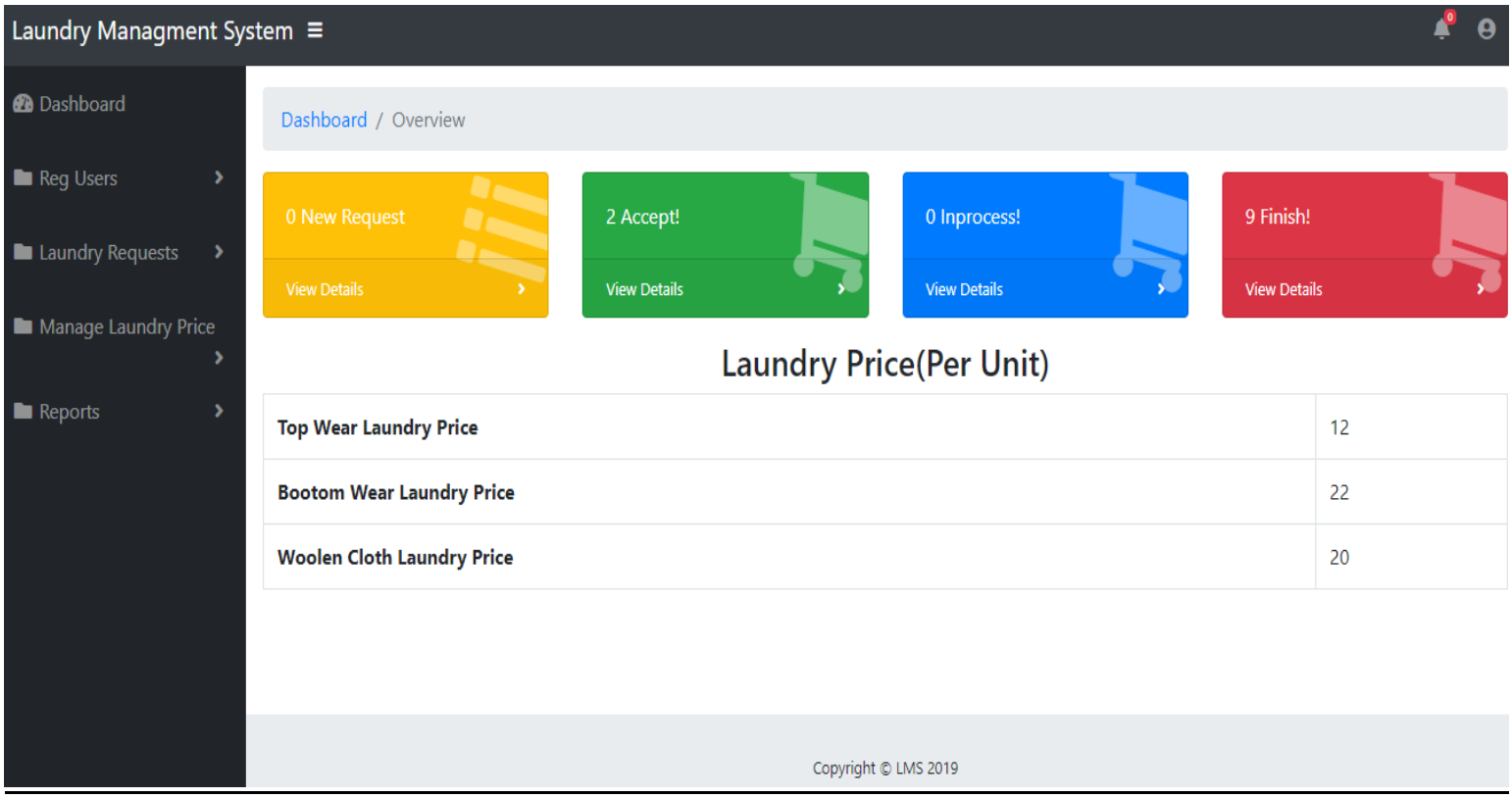
User Laundry Request Details



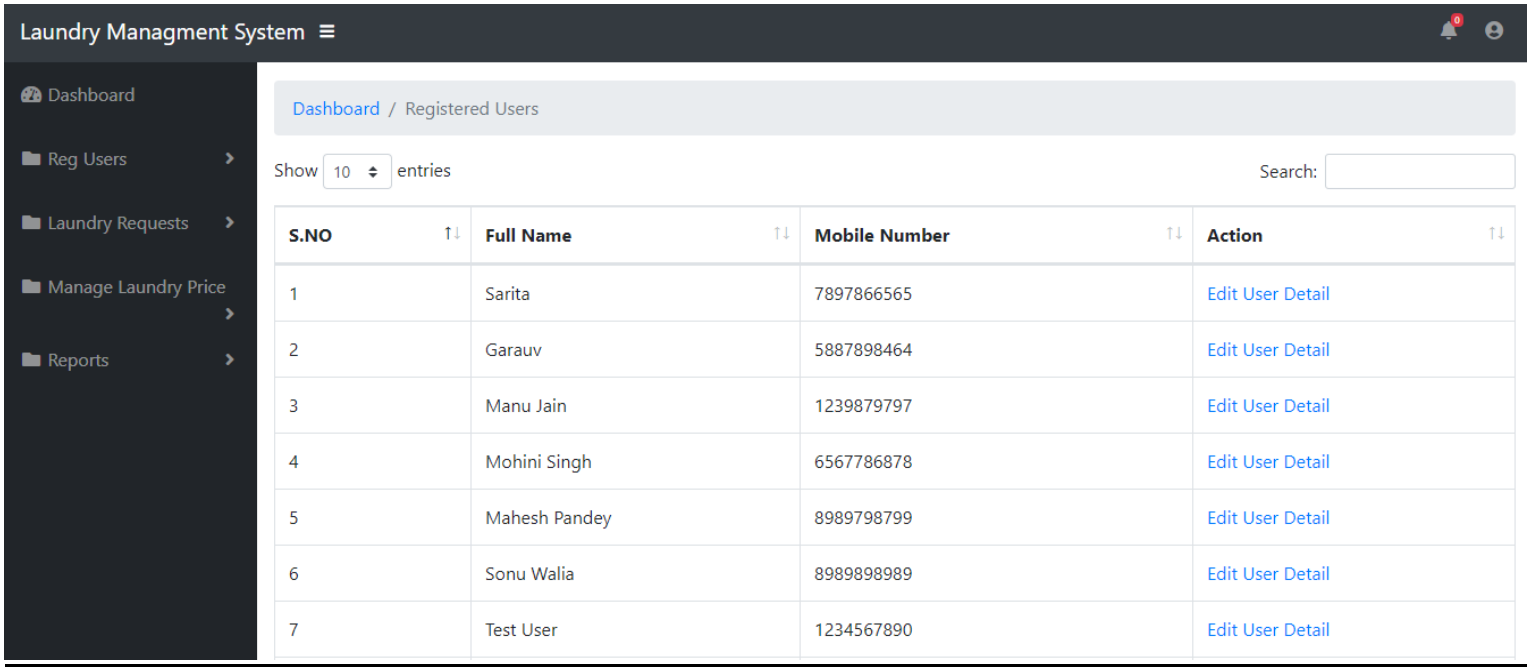
Admin login



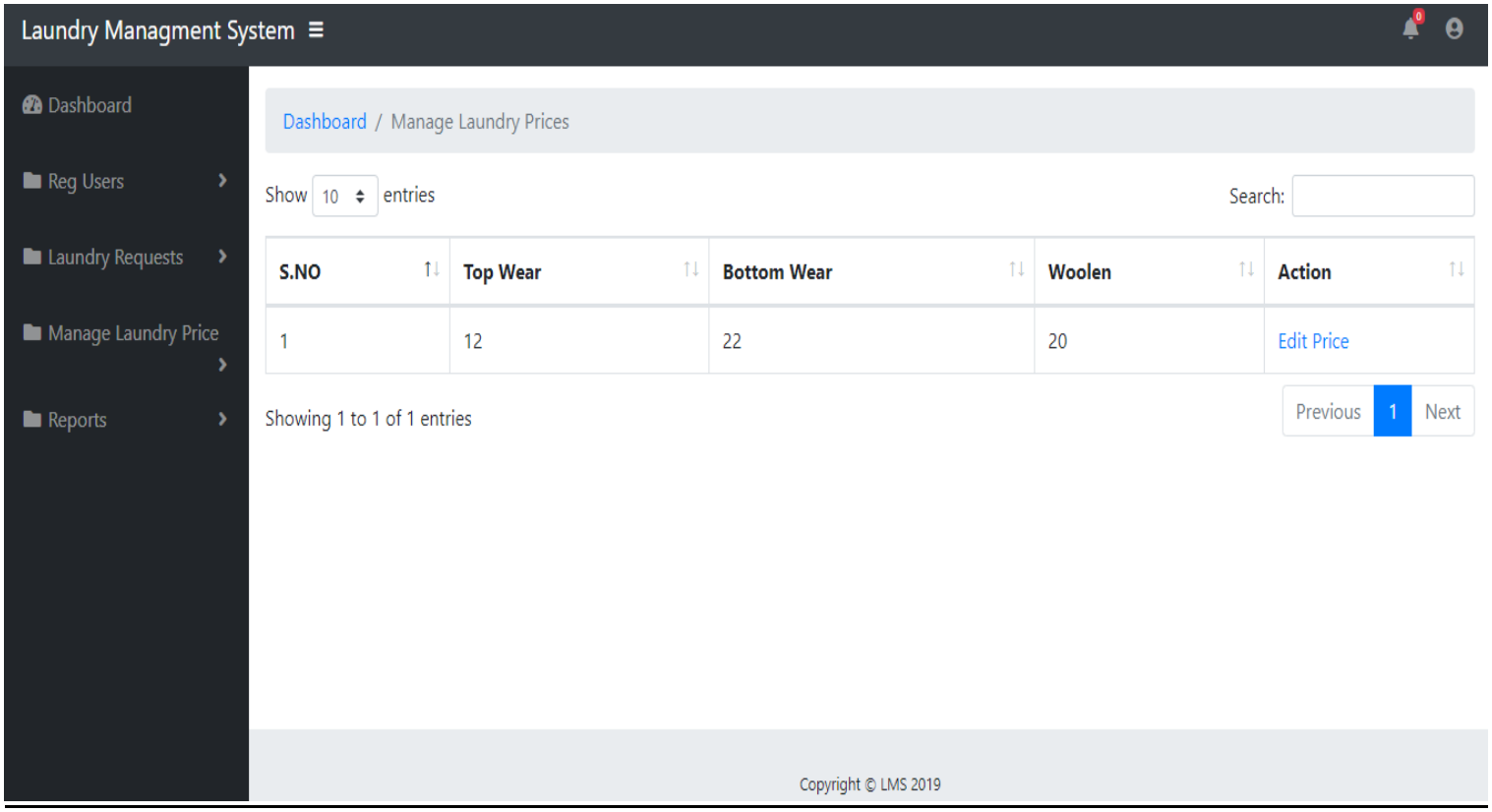
Admin Dashboard



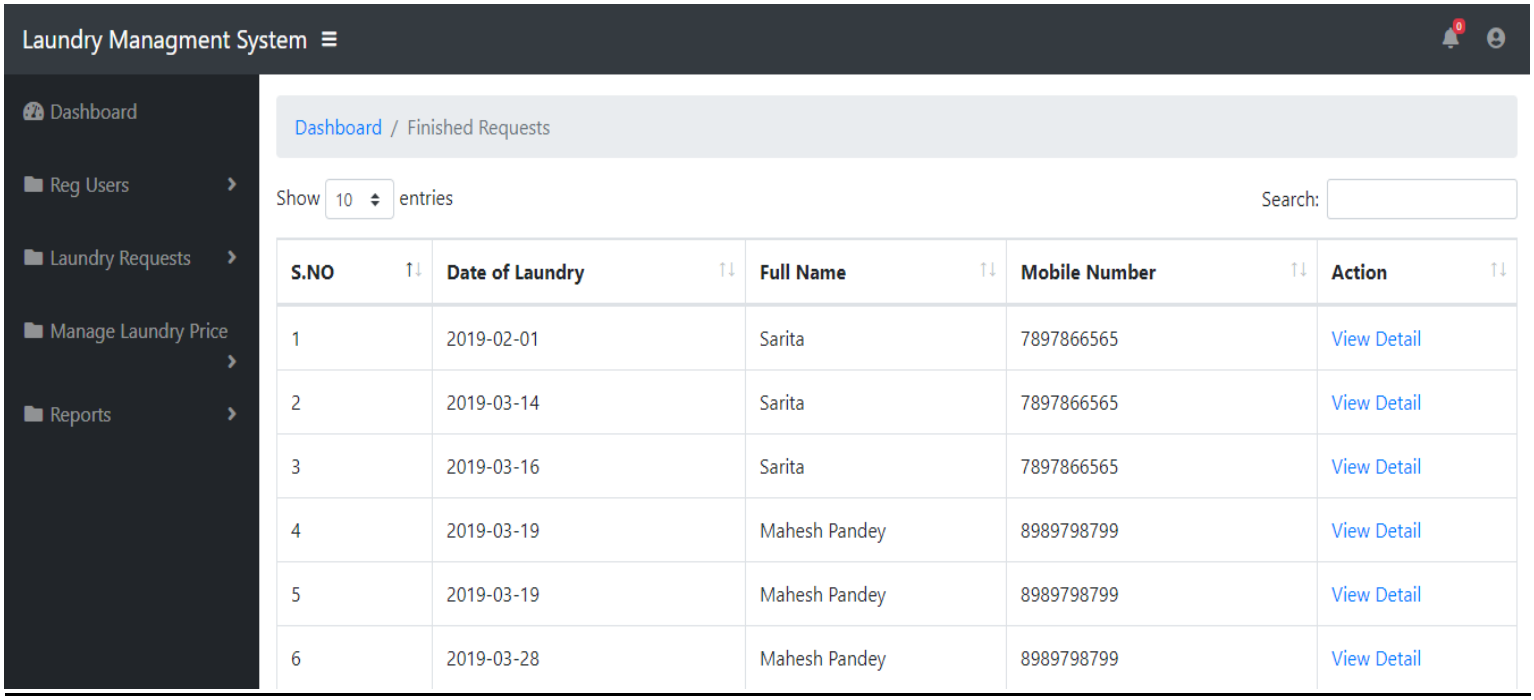
Registered Users



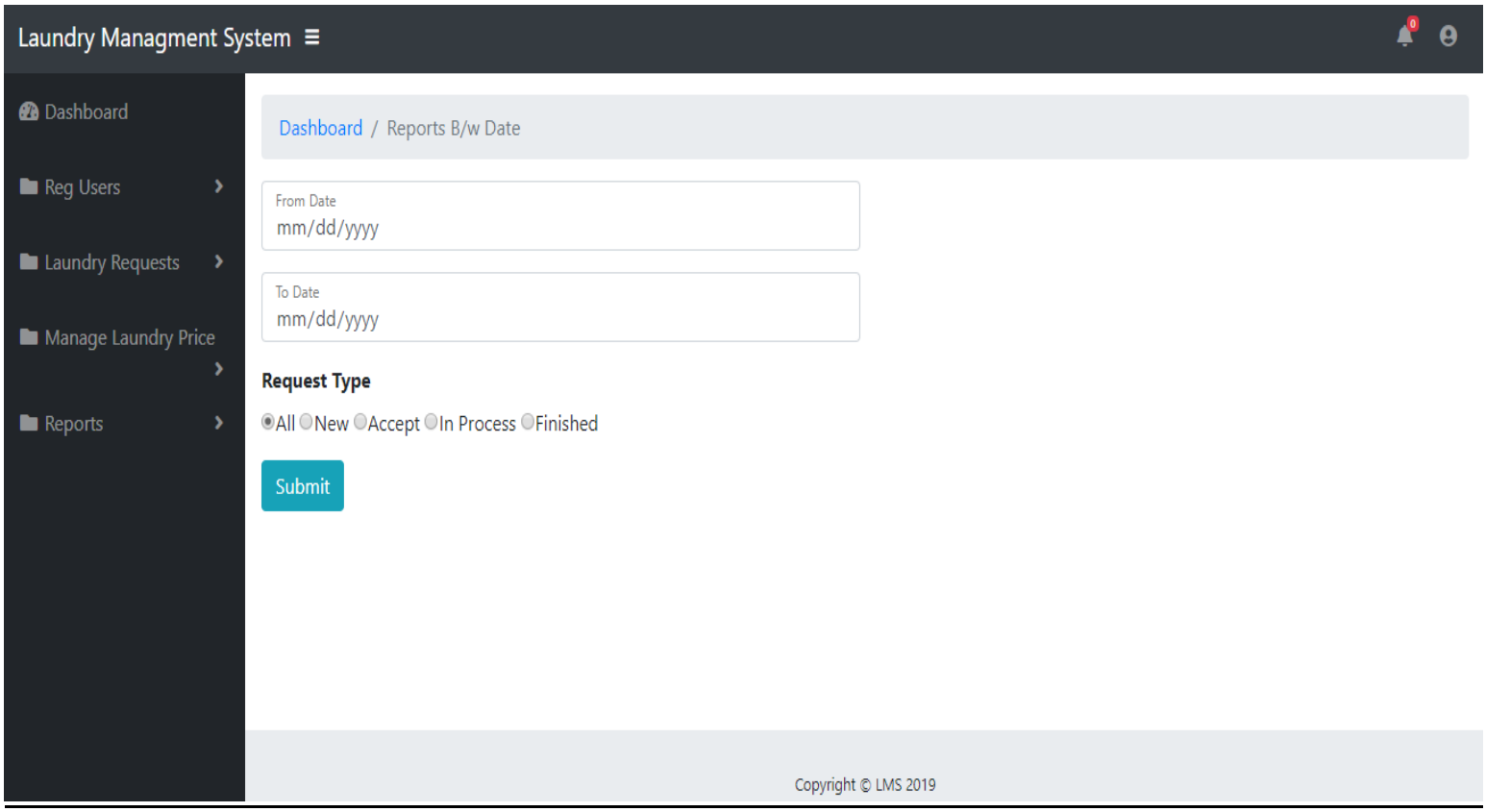
Manage Laundry Prices



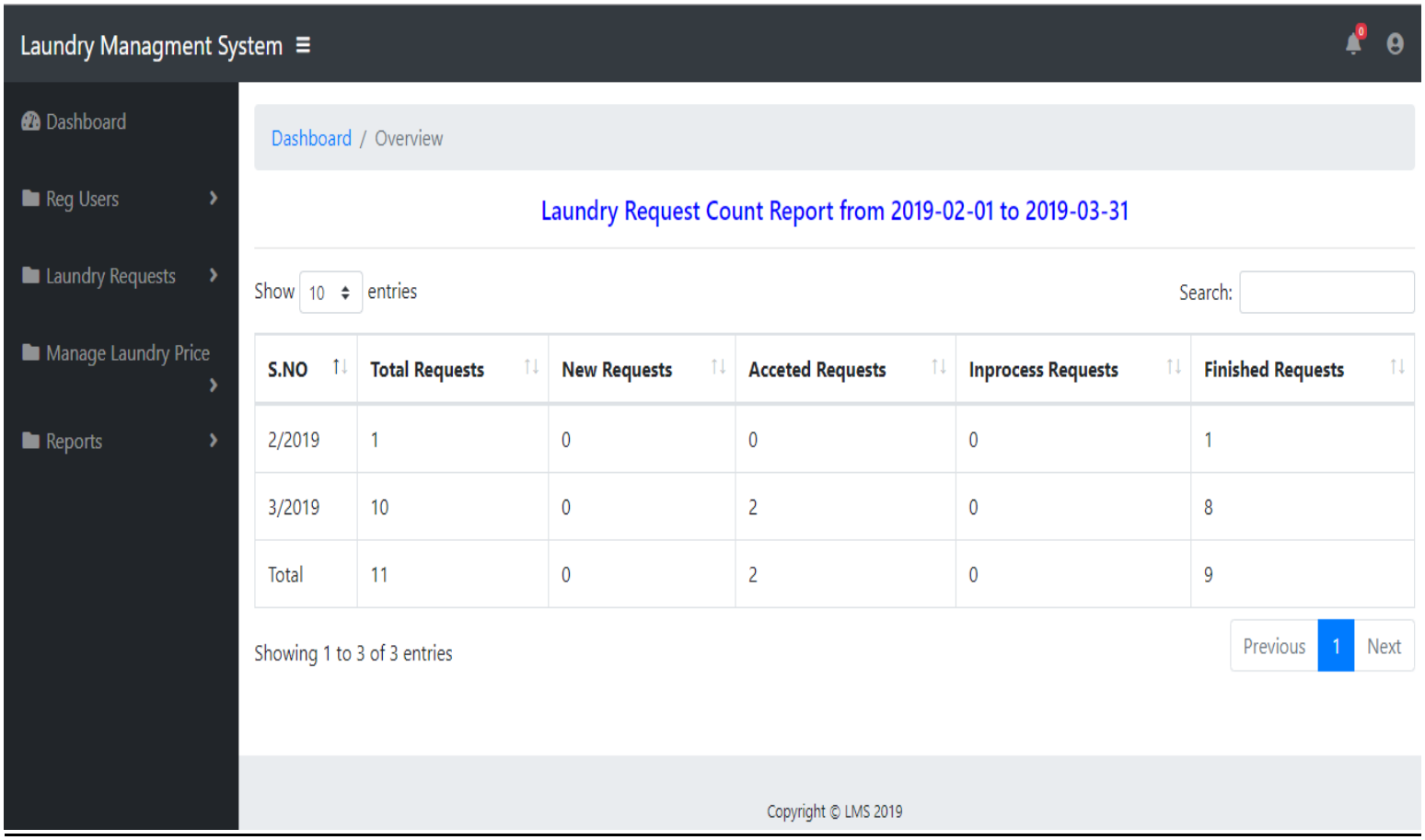
User Requests List



Report B/w Dates



Laundry Request Count Report



CONCLUSION

The package was designed in such a way that future modifications can be done easily. The following conclusion can be deduced from the development of the project.

- Automation of the entire system improves the efficiency.
- It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- It gives appropriate access to the authorized users depending on their permissions.
- It effectively overcomes the delay in communications.
- Updating of information becomes so easier.
- System security, data security and reliability are the striking features.
- The System has adequate scope for modification in future if it is necessary.

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