PROJECT REPORT

ON

FOOD WASTE MANAGEMENT SYSTEM

Submitted by

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CERTIFICATE

This is to certify that the project work titled "**FOOD WASTE MANAGEMENT SYSTEM"** is a bonafied project work submitted by P.Asma, J.Sai Sindhu,V.Nandini in the department of COMPUTER SCIENCE AND ENGINEERING in partial fulfilment of requirements for the award of degree of Bachelor of Technology in Computer Science and Engineering.For the award of degree of Bachelor of Technology in Computer Science and Engineering for the year 2022-2023 carried out the work under the supervision.

GUIDE	HEAD OF THE DEPARTMENT
A.MAHENDRA	N.SATYANANDARAM
(M.Tech PhD)	(MSIT IIIT-Hyd)

ACKNOWLEDGEMENT

we are over helmed in all humbleness and greatfulness to acknowledge our depth to all those who have helped me to put these ideas, well above the level of simplicity and into something concrete.

We are extremely greatful to our respected Director,prof. K. SANDHYA RANI madam for fostering an excellent academic climate in our institution.

We also express our sincere gratitude to our respected Head of the Department Mr.N.SATYANANDARAM sir for his encouragement overall guidance in viewing this project a good asset and effort in bringing our project.

we would like to express my special thanks of gratitude to my esteemed guide, MR.MAHENDRA sir who gave us the golden opportunity to do this wonderful project which also helped us in doing a lot of Research and we came to know about so many new things. we are really thankful to them.
Any attempt at any level can 't be satisfactorily completed without the support and guidance of friends.

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Abstract

Food waste is an untapped energy source that mostly ends up rotting in landfills,thereby releasing greenhouse gases into the atmosphere.In recent times, food wastage is increasing at an unprecedented rate and creating a negative effect on the economic growth factors. This in turn creates a major impact on the agricultural processing industries. As food recycling is always remaining as a complex task, in this project, we are focusing mainly on the food wastage in the office premises, wedding, events etc. This web application is used to manage wastage foods in a useful way. Every day the people are wasting lots of foods. So we have to reduce that food wastage problem through online. In general we are automating the process of the food wastages.

Introduction

Food Wastage Management System is a web based technology which manages foods. This web application provides interface between food donor and food require. In this application food donor enter their food quantity details and addresses.

The donator can create the account and whenever they are having wastage food they can login and give request to the admin. The admin collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The donor details are e maintained confidential because it maintains a separate account for each donor.

In this project we use PHP and MySQL database and it has only three module i.e. Admin, donor, and user.

Advantages:

- Provide platform between food donor and food hunger.
- Reduce time consumption.
- Reduce error scope.
- All system managements are automated.
- Centralized database management.
- Easy operations for operator of the system.
- No paper work requirement.

Disadvantages:

- The system can only handle single person.

Feasibility study

Whenever we design a new system, normally the management will ask for a feasibility report of the new system. The management wants to know the technicalities and cost involved in creation of new system.

- Technical feasibility
- Economic feasibility
- Physical feasibility

Technical feasibility:

Technical feasibility involves study to establish the technical capability of the system being created to accomplish all requirements to the user. The system should be capable of handling the proposed volume of data and provide users and operating environment to increase their efficiency.
For example, system should be capable of handling the proposed volume of data and provide users.

Economic feasibility:

Economic feasibility involves study to establish the cost benefit analysis. Money spent on the system must be recorded in the form of benefit from the system. The benefits are of two types:

Tangible benefits:

- Saving man labor to do tedious tasks saves time.
-

Intangible benefits:

- Improves the quality of organization.

Physical feasibility:

It involves study to establish the time responses of the new system being created. For e.g., if the new system takes more than one day to prepare crucial finance statement for the management, wherever it was required in an hour, the system fails to provide the same.

It should be clearly establish that the new system requirements in the form of time responses would be completely met with. It may call for increase in cost. If the required cost is sacrificed then the purpose of the new system may not be achieved even if it was found to be technically feasible.

Scope of the Project

In proposed system we are reduce that food wastage using that application. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The admin collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator through this way we can reduce food wastage problem.

In this project there is three module i.e. Admin, Donor and user.

Admin

Admin:

1. **Dashboard**: In this section, admin can view total state, total city, Total Food Donor, Total Listed Food, All Food Request, New Food Request, Rejected Food Request and Completed Food Request,.
2. **State**: In this section, admin can manage state (Add/Update/Del).
3. **City**: In this section, admin can manage city (Add/Update/Del).

4. **Reg Food Donor:** In this section, admin can view registered food donor.
5. **Listed Food:** In this section, admin can view the listed food by food donor.
6. **Food Request:** In this section, admin can view the request for food which is send user.

Admin can also update his profile, change the password and recover the password.

Donor

1. **Dashboard**: In this section, donor can view total listed food and total food take away.
2. **List Your Food Detail:** In this section, donor can list the donated food detail.
3. Donor can also update his profile, change the password and recover the password.

Visited Users

1. **Home:** User can visit the website and check the details.
2. **About Us**: User can see the details of the website.
3. **Contact Us**: User can see the contact detail and contact the website administrator.
4. **Food Available List**: User can view available donated food and send the request for food.

Software & Hardware requirements

- ✓ Any Version of browser after Mozilla Firefox 4.0, Internet Explorer 6.0,chrome

Hardware requirements:

- ✓ Any processor after Pentium 4.
- ✓ Any version of Ubuntu or Windows XP
- ✓ Processor speed: 2.0 GHz

- ✓ RAM : 1GB
- ✓ Hard disk: 40GB to 80 GB

Software requirements:

- ✓ Database : MySQL
- ✓ Server : Apache
- ✓ Frontend : HTML,CSS
- ✓ Scripting Language : JavaScript
- ✓ Technology : PHP

System Design

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data

Unified Modelling Language Diagrams (UML):

- The unified modelling language allows the software engineer to express an analysis model using the modelling notation that is governed by a set of syntactic semantic and pragmatic rules.
- A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

User Model View

i. This view represents the system from the users perspective.

ii. The analysis representation describes a usage scenario from the end-users perspective**.**

Structural model view

- In this model the data and functionality are arrived from inside the system.
- This model view models the static structures.

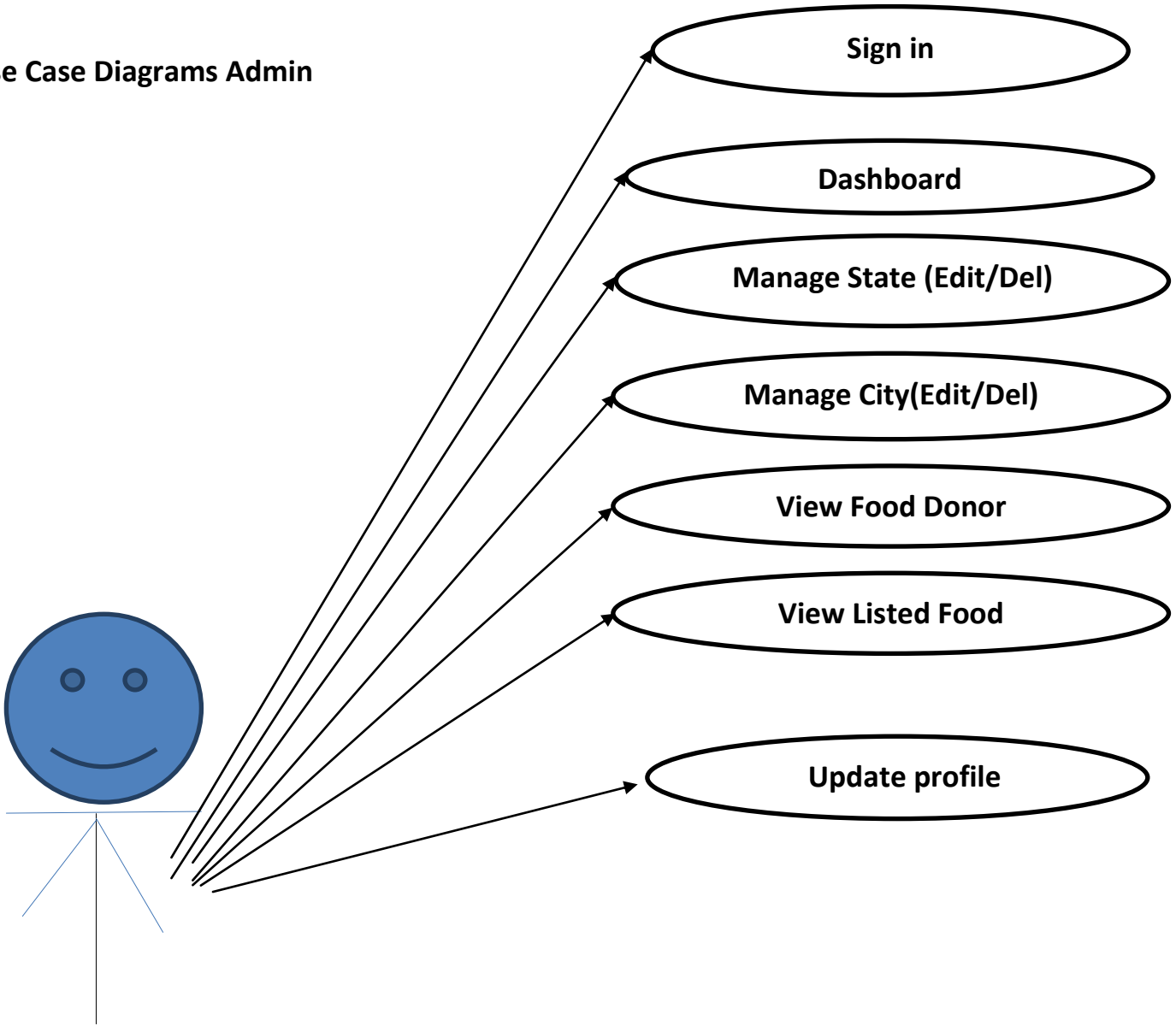
Behavioural Model View

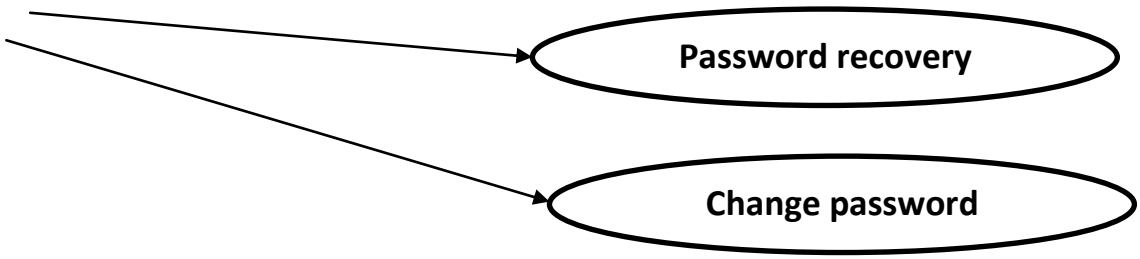
- It represents the dynamic of behavioural as parts of the system, depicting the interactions of collection between various structural elements described in the user model and structural model view.

Implementation Model View

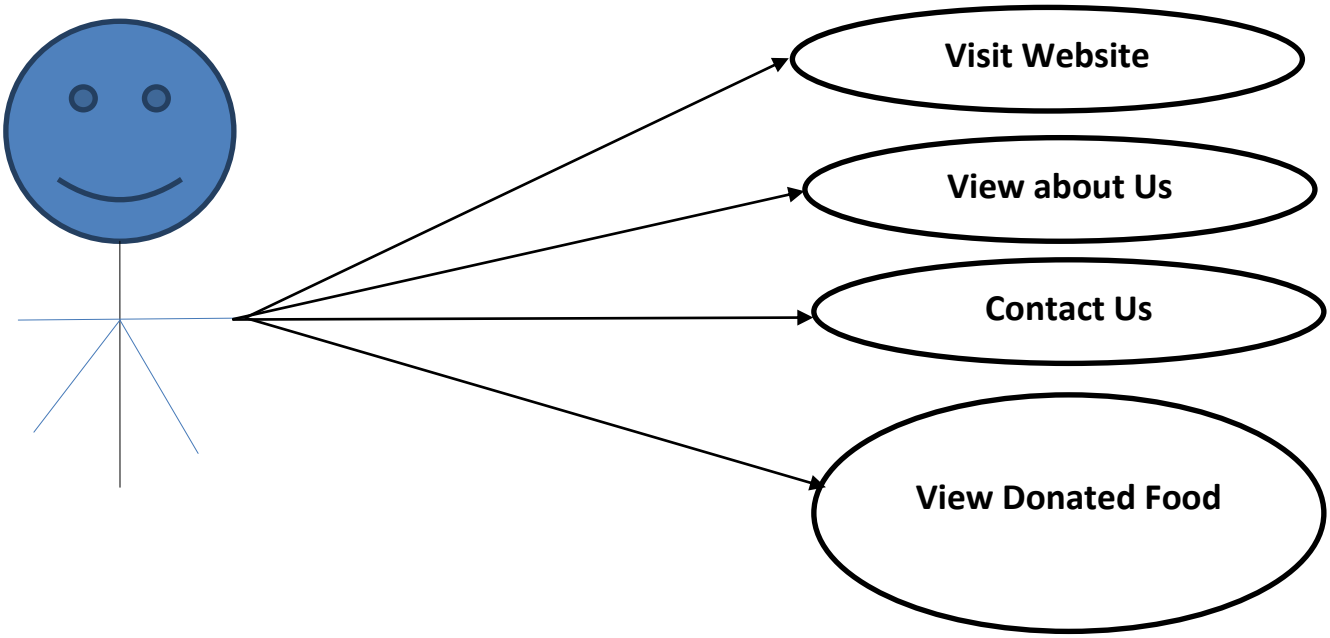
- In this the structural and behavioural as parts of the system are represented as they are to be built.

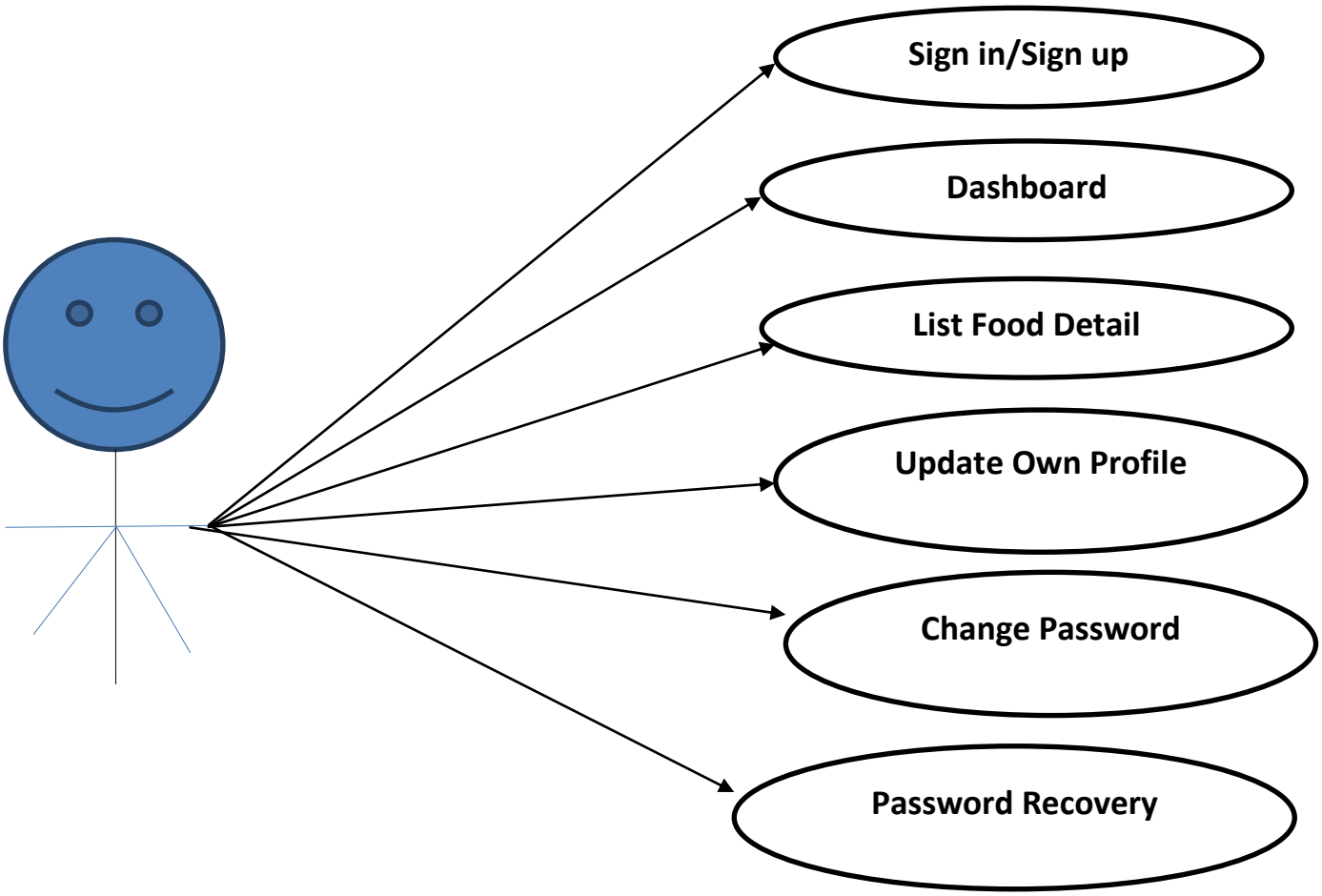
Use Case Diagrams Admin





Use Case Diagram of Donor

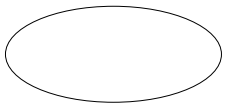
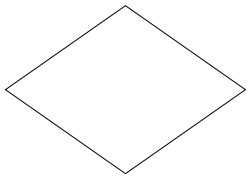




ENTITY-RELATIONSHIP Diagrams

E-R (Entity-Relationship) Diagram is used to represents the relationship between entities in the table.

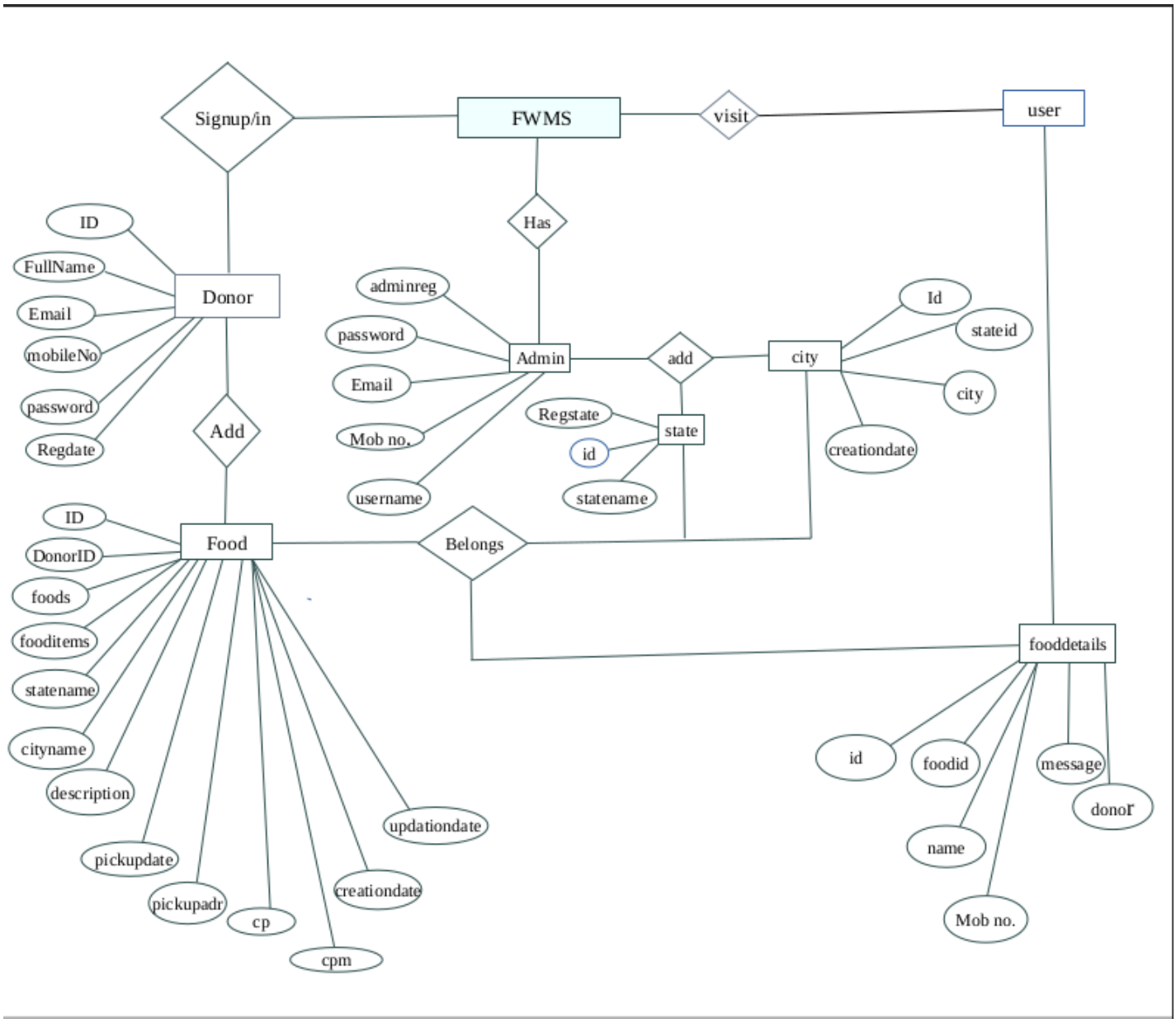
The symbols used in E-R diagrams are:

SYMBOL	PURPOSE
	Represents Entity sets.
	Represent attributes.
	Represent Relationship Sets.
	Line represents flow

Structured analysis is a set of tools and techniques that the analyst.

To develop a new kind of a system:

The traditional approach focuses on the cost benefit and feasibility analysis, Project management, and hardware and software selection a personal considerations.


Signup/in
FWMS
visit
user
Has
ID
FullName
Email
mobileNo
password
Regdate
Donor
Add
adminreg
password
Email
Mob no.
username
Admin
add
city
Id
stateid
city
creationdate
Regstate
id
state
statename
ID
DonorID
foods
fooditems
statename
cityname
description
Food
Belongs
pickupdate
pickupadr
cp
cpm
creationdate
updationdate
fooddetails
id
foodid
name
Mob no.
message
donor

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 MySQL database has been chosen for developing the relevant databases.

Food Waste Management System (FWMS) contains 8 MySQL tables :

tbladmin table Structure : This table store the admin login and personal Details.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	AdminName	varchar(120)	utf8mb4_general_ci		Yes	*NULL*		
3	UserName	varchar(120)	utf8mb4_general_ci		Yes	*NULL*		
4	MobileNumber	bigint(10)			Yes	*NULL*		
5	Email	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
6	Password	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
7	AdminRegdate	timestamp			Yes	current_timestamp()		

tblcity table Structure : This table store name of city.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	StateID	int(10)			Yes	*NULL*		
3	City	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
4	CreationDate	timestamp			Yes	current_timestamp()		

tblstate table Structure : This table store name of state.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	StateName	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
3	RegState	timestamp			Yes	current_timestamp()		

tblcontact table Structure : This table store the detail of contact us persons.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	FirstName	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
3	LastName	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
4	Email	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
5	Phone	bigint(10)			Yes	*NULL*		
6	Message	mediumtext	utf8mb4_general_ci		Yes	*NULL*		
7	EnquiryDate	timestamp			No	current_timestamp()		
8	IsRead	int(5)			Yes	*NULL*		

tbldonor table Structure : This table store the detail of food donor.

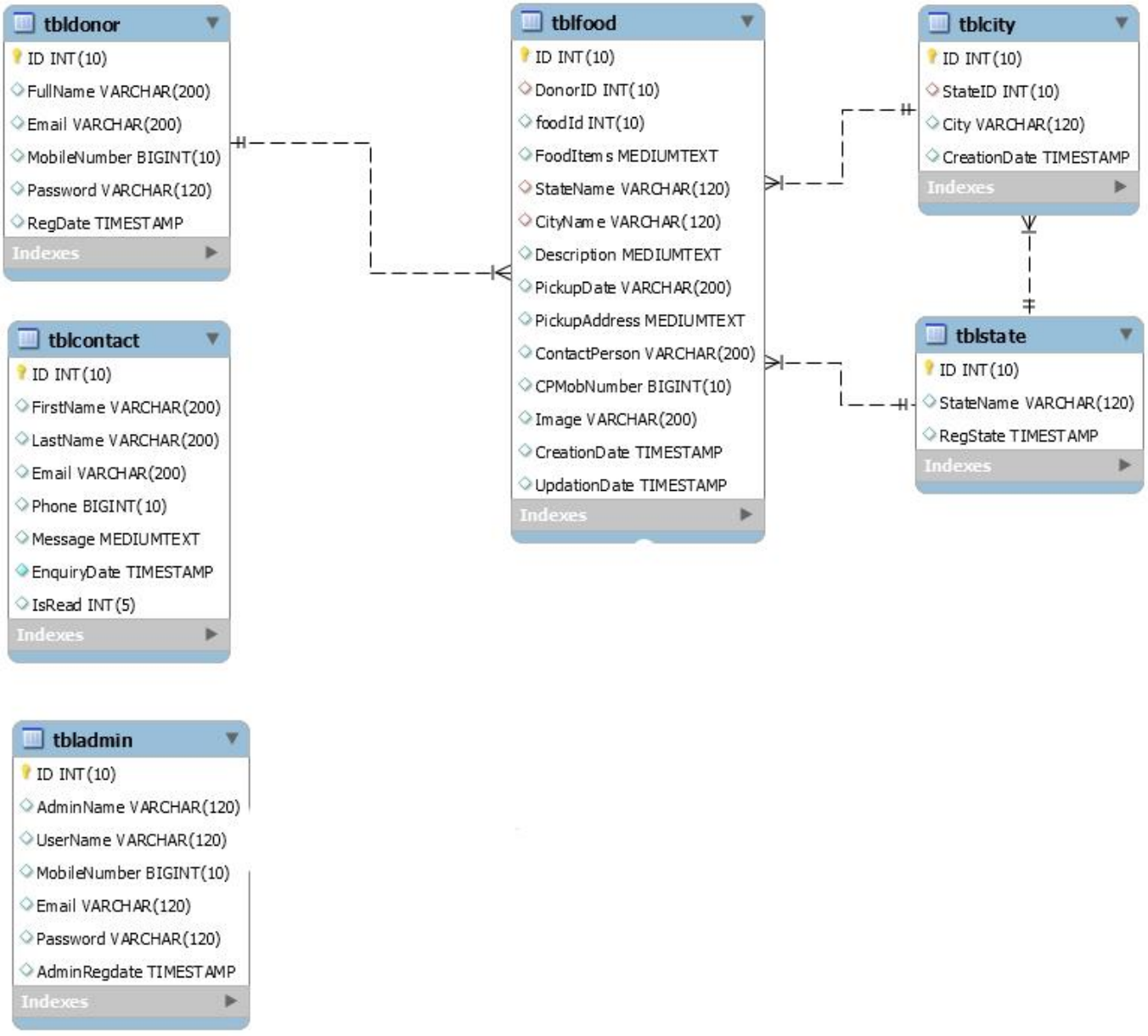
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**ID**	int(10)			No	*None*		AUTO_INCREMENT
2	**FullName**	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
3	**Email**	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
4	**MobileNumber**	bigint(10)			Yes	*NULL*		
5	**Password**	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
6	**RegDate**	timestamp			Yes	current_timestamp()		

tblfood table Structure : This table store the detail of donated food.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**id**	int(11)			No	*None*		AUTO_INCREMENT
2	**requestNumber**	bigint(12)			Yes	*NULL*		
3	**foodId**	int(1)			Yes	*NULL*		
4	**fullName**	varchar(150)	utf8mb4_general_ci		Yes	*NULL*		
5	**mobileNumber**	bigint(12)			Yes	*NULL*		
6	**message**	mediumtext	utf8mb4_general_ci		Yes	*NULL*		
7	**requestDate**	timestamp			Yes	current_timestamp()		
8	**status**	varchar(120)	utf8mb4_general_ci		Yes	*NULL*		
9	**donorRemark**	mediumtext	utf8mb4_general_ci		Yes	*NULL*		
10	**requestCompletionDate**	timestamp			Yes	*NULL*		ON UPDATE CURRENT_TIMESTAMP()

Class Diagram:

The class diagram shows a set of classes, interfaces, collaborations and their relationships.



System Testing

SOFTWARE TESTING TECHNIQUES:

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, designing and coding.

TESTING OBJECTIVES:

1. Testing is process of executing a program with the intent of finding an error.
2. A good test case design is one that has a probability of finding an as yet undiscovered error.
3. A successful test is one that uncovers an as yet undiscovered error.

These above objectives imply a dramatic change in view port.
Testing cannot show the absence of defects, it can only show that software errors are present.

There are three types of testing strategies

1. Unit test
2. Integration test
3. Performance test

Unit Testing:

Unit testing focuses verification efforts on the smallest unit of software design module. The unit test is always white box oriented. The tests that occur as part of unit testing are testing the module interface, examining the local data structures, testing the boundary conditions, execution all the independent paths and testing error-handling paths.

Integration Testing:

Integration testing is a systematic technique or construction the program structure while at the same time conducting tests to uncover errors associated with interfacing. Scope of testing summarizes the specific functional, performance, and internal design characteristics that are to be tested. It employs top-down testing and bottom-up testing methods for this case.

Performance Testing:

Timing for both read and update transactions should be gathered to determine whether system functions are being performed in an acceptable timeframe.

Output Screen of Project

Home Page

Contact Us

CONTACT

WANT TO WORK WITH US?

First Name

First Name

Last Name

Last Name

Phone

Phone

Your Email

Email

Your Message

Message..

Send

CONTACT US

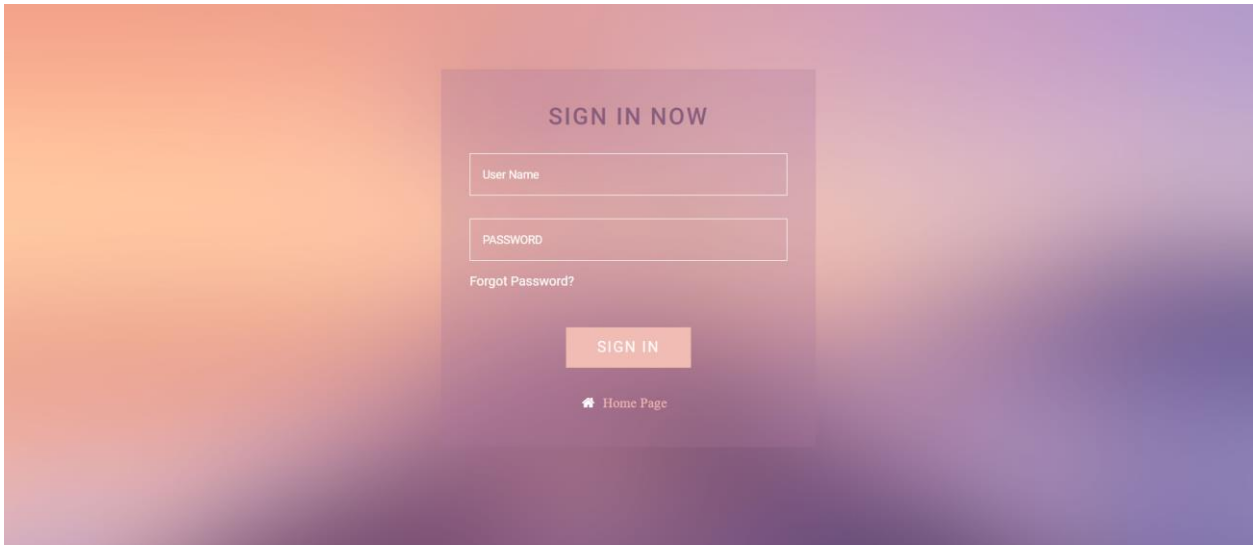
Address
Food Waste Management System

Contact Number:+91-96784532145
email: info@gmail.com
Address : test address

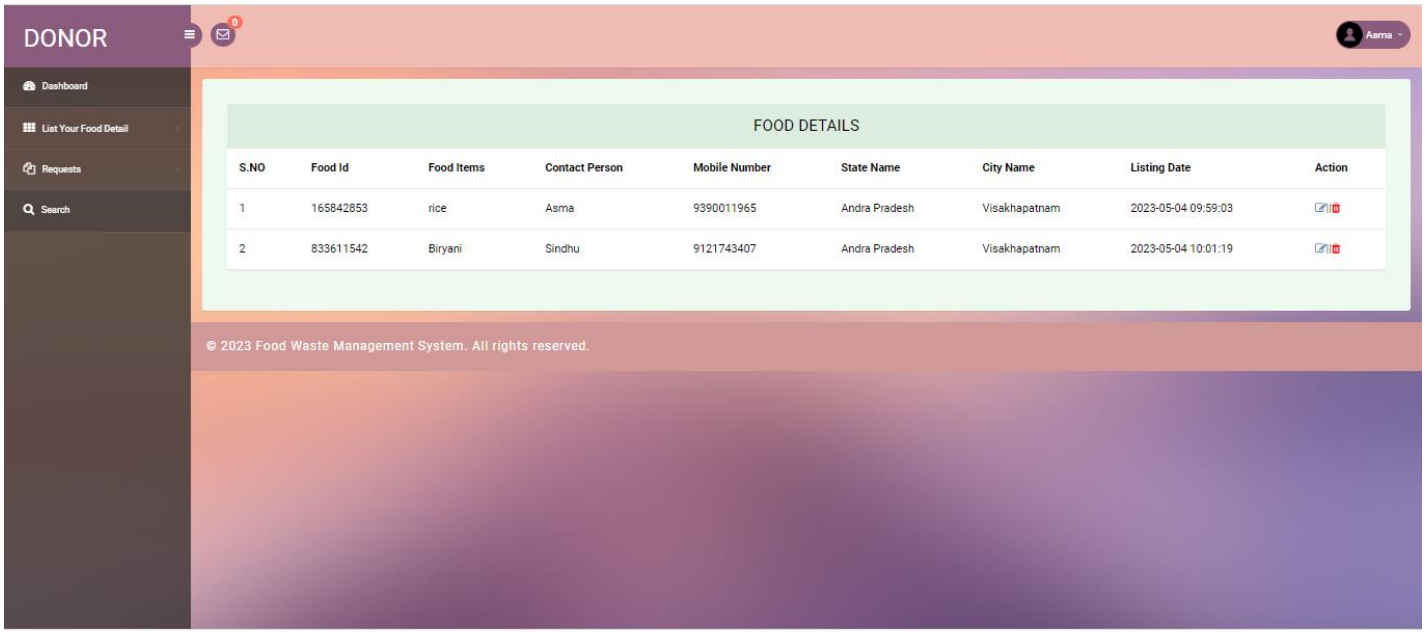
Available Food List

S.NO	Contact Person	Contact Person Mobile Number	Food Items	Address	State Name	City Name	Creation Date	Action
1	John	1478523699	Dal,Rice,Roti,Panner	H 23423 Sector 10	Utter Pradesh	Allahabad	2022-01-22 14:54:51	View Details
2	Rahul Singh	9874563210	Dal Maknhi,Bread,Rice	J 466 ABC Street	Andra Pradesh	Visakhapatnam	2022-01-22 15:50:35	View Details
3	Amit Kumar	9852364710	Dal,Rice,Mix Veg,Panner	A 347583 XYZ Street	Uttar Pradesh	Aligarh	2022-01-23 11:56:22	View Details
4	Asma	9390011965	rice	kadapa	Andra Pradesh	Visakhapatnam	2023-05-04 09:59:03	View Details
5	Sindhu	9121743407	Biryani	kurnool	Andra Pradesh	Visakhapatnam	2023-05-04 10:01:19	View Details
6	Asma	9390011965	Rice	kadapa	Andra Pradesh	Visakhapatnam	2023-05-04 10:45:02	View Details
7	Sindhu	9121743407	chapathi	kurnool	Andra Pradesh	Visakhapatnam	2023-05-04 10:46:18	View Details

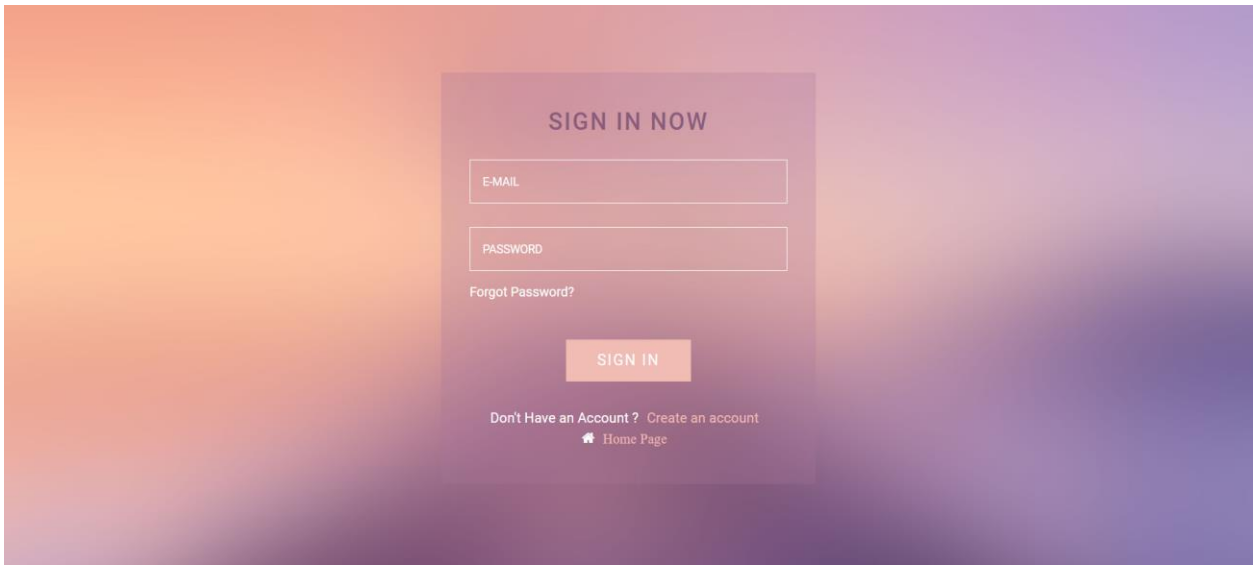
SIGN IN PAGE



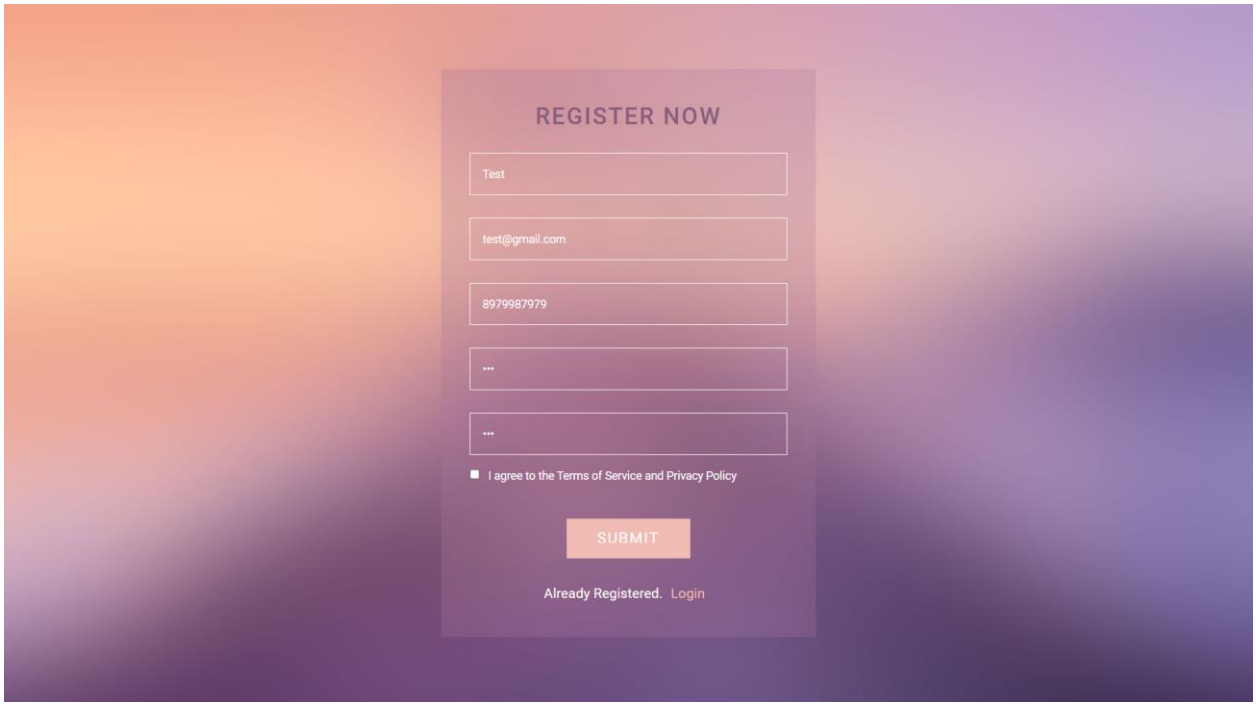
Listed Food



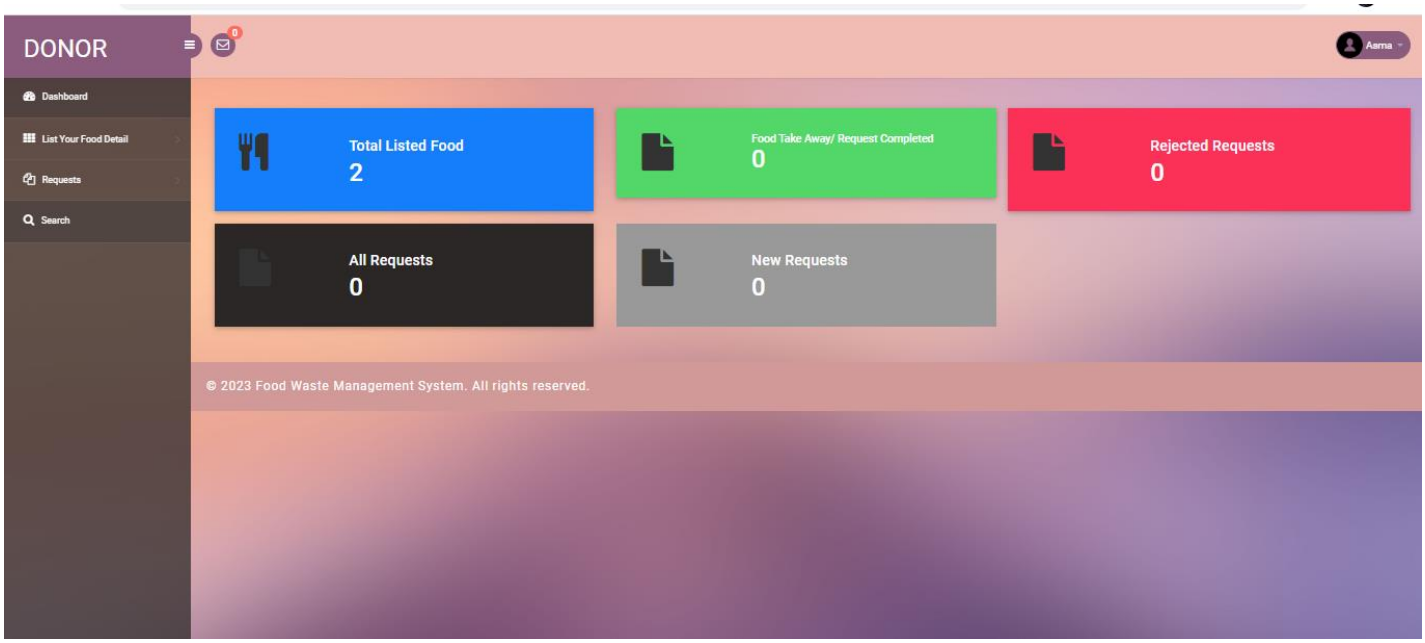
SIGN IN PAGE(donor)



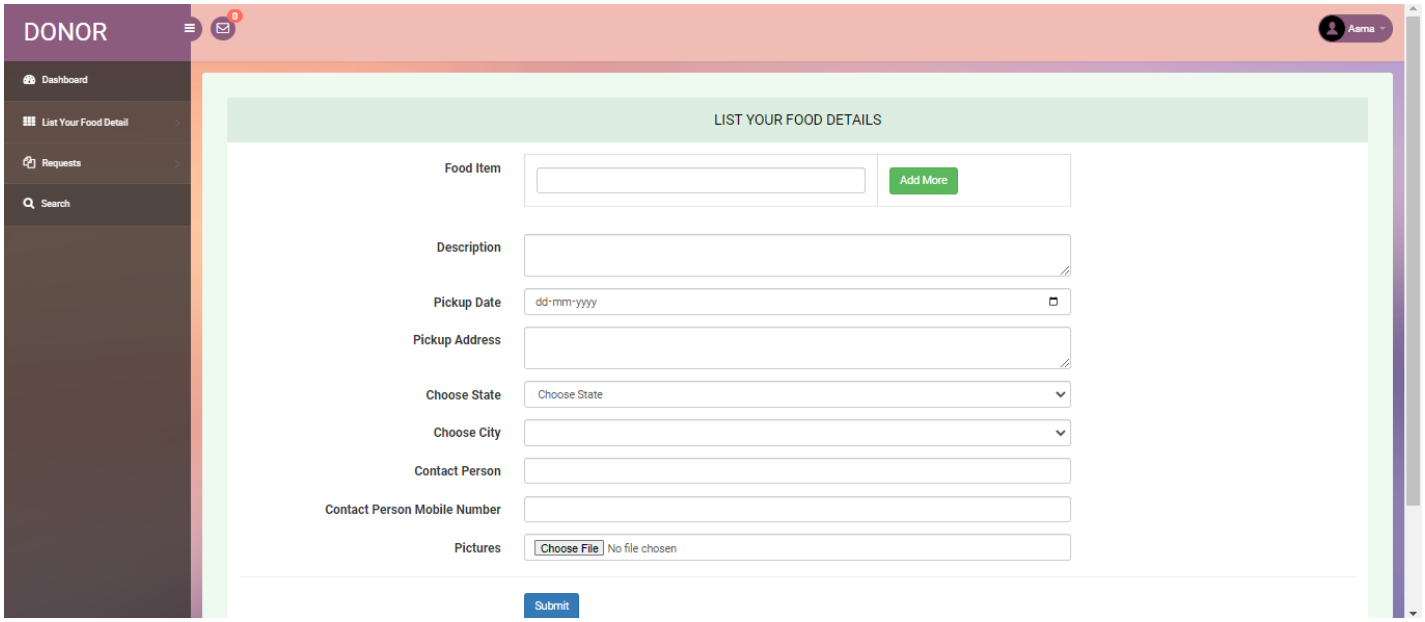
Registration Page



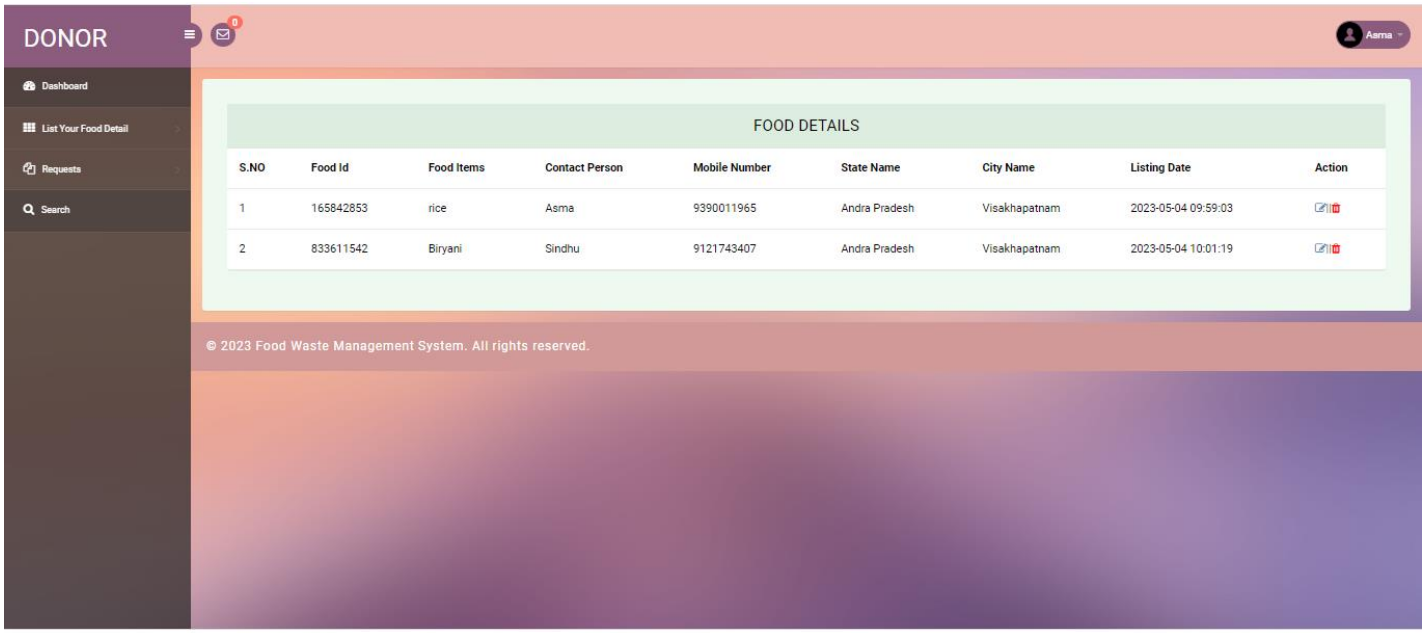
Dashboard



LIST YOUR FOOD DETAILS



UPDATED FOOD LIST



Here after filling the details of Donors who donated the food the updated list be shown above.

Conclusion

The project titled as **Food Wastage Management System** was deeply studied and analyzed to design the code and implement. It was done under the guidance of the experienced project guide. All the current requirements and possibilities have been taken care during the project time.

In our project, we are targeting the person who wants to donate wastage food this will create a greater impact on the cost saving as well as the food wastage management system, and there will be greater impact on the day by day food wastage. In our future work, we will try to integrate with other emerging technology such as block chain and also it will cover more areas.

References

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- https://www.sitepoint.com/php/
- https://www.php.net/

For MySQL

- https://www.mysql.com/
- http://www.mysqltutorial.org

- **For XAMPP**

- https://www.apachefriends.org/download.html