**A Project Report**

On

# WEB DEVELOPMENT

**Submitted in partial fulfillment of requirements for the award of the degree of**

## Bachelor of Technology

In

**Computer Science & Engineering (Internet of Things)**

By

**A. CHETAN SAI KRISHNA - 20BQ1A4902**
**B. HARICHARAN REDDY -20BQ1A4910**


## Department of Computer Science & Engineering (Internet of Things)

**VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY**
**Approved by AICTE, Permanently Affiliated to JNTU, KAKINADA**
**Accredited by NBA & Accredited by NAAC with 'A' Grade**
**Nambur (V), Peda Kakani (M), Guntur (Dt) – 522508**

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# BONAFIDE CERTIFICATE

This is to certify that this Internship report is the bonafide work of "**A. CHETAN SAI KRISHNA (20BQ1A4902), B. HARICHARAN REDDY (20BQ1A4910)** who carried out the project under my SPOC during the academic year 2021-2022 towards partial fulfillment of the requirements of the Degree of **Bachelor of Technology** in **Computer Science & Engineering (Internet of Things)** from **Jawaharlal Nehru Technological University, Kakinada**.

Signature of the SPOC

**Dr. S. Krishna Prasad** M.Tech, Ph.D.
**Associate Professor, CSO.**

Signature of the Head of the Department

**Dr. C.V. Suresh** M.Tech, Ph.D.
**Professor, CSO.**

**Submitted for Viva-voce Examination held on _____**

**EXTERNAL EXAMINER**

**VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY**

**Department of CSE(IoT)**


# CERTIFICATE OF AUTHENTICATION

I solemnly declare that this project report **"WEB DEVELOPMENT"** is Bonafide work done purely by me, carried out under the Single Point of Contact of **Dr. S. Krishna Prasad**, Assoc. Prof., towards partial fulfillment of the requirements of the Degree of Bachelor of Technology in CSE from Jawaharlal Nehru Technological University, Kakinada during the year 2021-22.

Signature of the Student

**A. CHETAN SAI KRISHNA -20BQ1A4902**

**B. HARICHARAN REDDY -20BQ1A4910**

# ABSTRACT

This thesis considers several instances of abstraction that arose in the design and implementation of the web programming language Links. The first concerns user interfaces, specified using HTML forms. We wish to construct forms from existing form fragments without introducing dependencies on the implementation details of those fragments. Surprisingly, many existing web systems do not support this simple scenario. We present a library that captures the essence of form abstraction, and extend it with more practical facilities, such as validation of the HTML a program produces and of the input a user submits. An important part of our library is simple semantics, given as the composition of three primitive "idioms", an interface to computation introduced by McBride and Paterson. In order to justify this approach, we present a comparison of idioms with the related notions of monads and arrows, refining the informal claims in the literature. Our library forms part of the Links framework for stateless web interactions. We describe a related aspect of this system, a pre-processor that derives generic instances of functions, which we use to serialize server state between client requests. The abstraction in this case involves the shape of datatypes: the serialization operation is specified independently of the particular types involved. Our final instance of abstraction involves abstract types. Functional programming languages typically offer one of two styles of abstract type: the abstraction boundary may be drawn using a private data constructor or using a type signature. We show that there is a pair of semantics-preserving translations between these two styles. In light of this, we revisit the decision of the Haskell designers to offer the constructor style and define a library that supports signature-style definitions in Haskell by translation into the constructor style.

# ACKNOWLEDGEMENT

We take this opportunity to express our deepest gratitude and appreciation to all those people who made this Internship work easier with words of encouragement, motivation, discipline, and faith by offering different places to look to expand my ideas and help me towards the successful completion of this Internship work.

First and foremost, we express our deep gratitude to **Mr. Vasireddy Vidyasagar**, Chairman, Vasireddy Venkatadri Institute of Technology for providing necessary facilities throughout the Computer Science & Engineering program.

We express our sincere thanks to **Dr. Y. Mallikarjuna Reddy**, Principal, Vasireddy Venkatadri Institute of Technology for his constant support and cooperation throughout the Computer Science & Engineering program.

We express our sincere gratitude to **Dr. C. V. Suresh**, Professor & HOD, Computer Science & Engineering, Vasireddy Venkatadri Institute of Technology for his constant encouragement, motivation, and faith by offering different places to look to expand my ideas.

We would like to express our sincere gratitude to our project Coordinators **Dr. C. V. Suresh** & **Dr. S. Krishna prasad** for their insightful advice, motivating suggestions, invaluable guidance, help, and support in the successful completion of this Project.

We would like to take this opportunity to express our thanks to the **teaching** and **non-teaching staff** in the Department of Computer Science & Engineering, VVIT for their invaluable help and support.

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# INDEX

# INTRODUCTION

# WEB DEVELOPMENT

**Web development** refers to the creation, building, and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet i.e. websites.

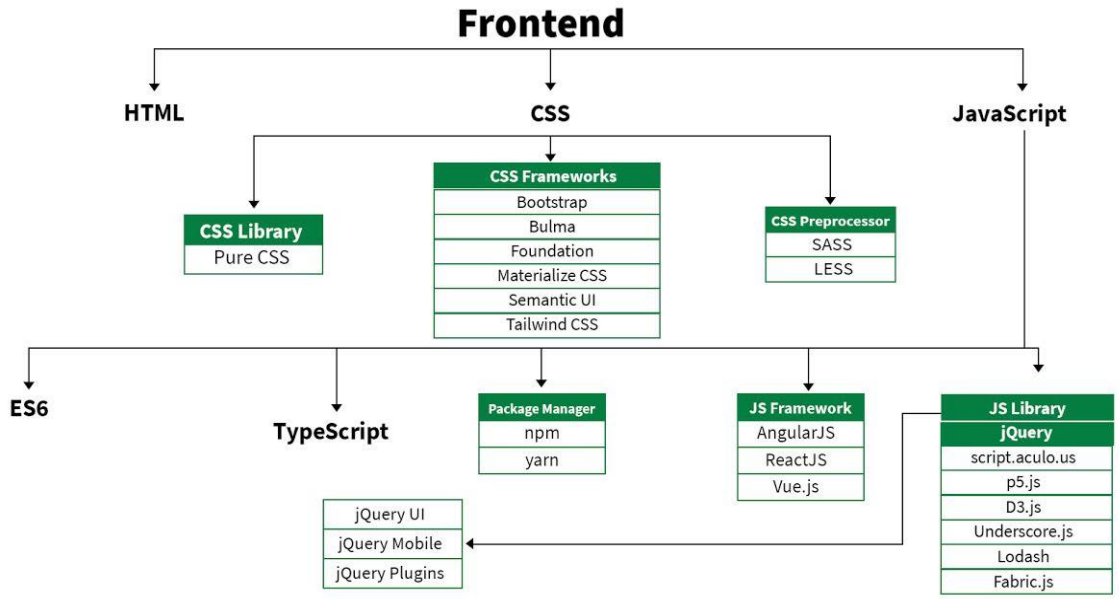
The word Web Development is made up of two words, that is:

- **Web:** It refers to websites, web pages, or anything that works over the internet.
- **Development:** It refers to building the application from scratch.

**Web Development can be classified into two ways:**

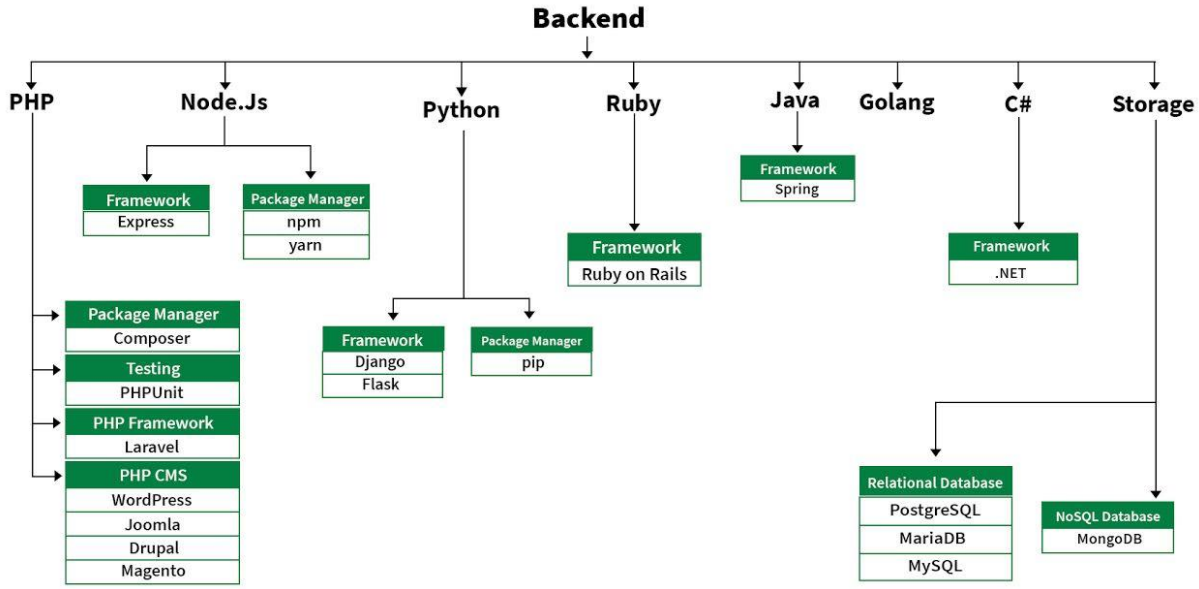
- **Frontend Development**
- **Backend Development**

**Frontend Development**



## Backend Development

Backend is the server side of a website. It is the part of the website that users cannot see and interact. It is the portion of software that does not come in direct contact with the users. It is used to store and arrange data.



# FOOD WASTAGE MANAGEMENT SYSTEM

- A drastic increase can be seen in food waste. As per data given by Food and Agriculture Organization (http://www.fao.org/food-loss-and-food-waste/flw-data), 1/3rd of food produced for human consumption is wasted globally, which accounts for almost 1.3 billion tons per year. On the other hand, also as per WHO20% of the population face extreme food shortages. Hence there is a need to come up with a solution that can avoid food waste & can help feed the needy.

- This android-based Food Waste Management system can assist in collecting the leftover food from hotels & restaurants to distribute among thin needy. NGOs that are helping poor communities battle starvation &malnutrition can raise a request for food supply from restaurants through this application. Once the request is accepted, the NGOs can collect the food from the restaurants for its distribution. In this way, this android-based food waste management system will help restaurants to reduce food waste and will help in feeding the poor and needy people.

- In this system, we have tried to reduce restaurant food wastage by giving waste food to NGOs. NGOs will raise a request, in case of any leftover food from restaurants. This request is sent to the restaurant manager of that particular restaurant. The NGO Manager then approves the request and assigns it to one of the employees for takeaway and forwards the request to the restaurant. The leftover food at the restaurant can be given to NGOs at the end of the day. The admin can track the history of restaurants and NGOs for the leftover foods

**Features:**
Login/Register System
Admin Panel
FEED ON Charity
FEED ON Restaurants
Details about Charity
Details about Restaurants

# 2.1 HTML

The **Hypertext Markup Language** or **HTML** is the standard markup language for documents designed to be displayed in a **web browser**. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as `<img />` and `<input />` directly introduce content into the page. Other tags such as `<p>` surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behaviour and content of web pages. The inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), the former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.[2] A form of HTML, known as HTML5, is used to display video and audio, primarily using the `<canvas>` element, in collaboration with JavaScript.

In the simple, general case, the extent of an element is indicated by a pair of tags: a "start tag" `<p>` and "end tag" `</p>`. The text content of the element, if any, is placed between these tags.

Tags may also enclose further tag markup between the start and end, including a mixture of tags and text. This indicates further (nested) elements, as children of the parent element.

The start tag may also include the element's *attributes* within the tag. These indicate other information, such as identifiers for sections within the document, identifiers used to bind style information to the presentation of the document, and for some tags such as the `<img>` used to embed images, the reference to the image resource in the format like this: `<img src="example.com/example.jpg">`

Some elements, such as the line break `<br />`, or `<br />` do not permit *any* embedded content, either text or further tags. These require only a single empty tag (akin to a start tag) and do not use an end tag.

# 2.2 CSS

**Cascading Style Sheets** (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of content and presentation, including layout, colors, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content; and enable the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

The name *cascading* comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) `text/css` is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.

In addition to HTML, other markup languages support the use of CSS including XHTML, plain XML, SVG, and XUL.

CSS information can be provided from various sources. These sources can be the web browser, the user, and the author. The information from the author can be further classified into inline, media type, importance, selector specificity, rule order, inheritance, and property definition. CSS style information can be in a separate document, or it can be embedded into an HTML document. Multiple style sheets can be imported.

Different styles can be applied depending on the output device being used; for example, the screen version can be quite different from the printed version, so authors can tailor the presentation appropriately for each medium.

The style sheet with the highest priority controls the content display. Declarations not set in the highest priority source are passed on to a source of lower priority, such as the user agent style. The process is called *cascading*.

# 2.3 JAVA SCRIPT

**JavaScript** (often shortened to **JS**) is a lightweight, interpreted, object-oriented language with first-class functions, and is best known as the scripting language for Web pages, but it's used in many non-browser environments as well. It is a prototype-based, multi-paradigm scripting language that is dynamic, and supports object-oriented, imperative, and functional programming styles.

JavaScript runs on the client side of the web, which can be used to design / program how the web pages behave on the occurrence of an event. JavaScript is an easy to learn and also powerful scripting language, widely used for controlling web page behavior.

Contrary to popular misconception, **JavaScript is *not* "Interpreted Java"**. In a nutshell, JavaScript is a dynamic scripting language supporting prototype based object construction. The basic syntax is intentionally similar to both Java and C++ to reduce the number of new concepts required to learn the language. Language constructs, such as if statements, for and while loops, and switch and try ... catch blocks function the same as in these languages (or nearly so).

JavaScript can function as both a procedural and an object oriented language. Objects are created programmatically in JavaScript, by attaching methods and properties to otherwise empty objects **at run time**, as opposed to the syntactic class definitions common in compiled languages like C++ and Java. Once an object has been constructed it can be used as a blueprint (or prototype) for creating similar objects.

JavaScript's dynamic capabilities include runtime object construction, variable parameter lists, function variables, dynamic script creation (via eval), object introspection (via for ... in), and source code recovery (JavaScript programs can decompile function bodies back into their source text).

The Mozilla project provides two JavaScript implementations. The first **ever** JavaScript was created by Brendan Eich at Netscape, and has since been updated to conform to ECMA-262 Edition 5 and later versions. This engine, code named SpiderMonkey, is implemented in C/C++. The Rhino engine, created primarily by Norris Boyd (also at Netscape) is a JavaScript implementation written in Java. Like SpiderMonkey, Rhino is ECMA-262 Edition 5 compliant.

Several major runtime optimizations such as TraceMonkey (Firefox 3.5), JägerMonkey (Firefox 4) and IonMonkey were added to the SpiderMonkey JavaScript engine over time. Work is always ongoing to improve JavaScript execution performance.

# 2.4 APACHE TOMCAT SERVER

**Apache Tomcat** (called "Tomcat" for short) is a free and open-source implementation of the Jakarta Servlet, Jakarta Expression Language, and WebSocket technologies.

It provides a "pure Java" HTTP web server environment in which Java code can also run. Thus it's a Java web application server, although not a full JEE application server.

Tomcat is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation, released under the Apache License 2.0 license.

Tomcat 8.x implements the Servlet 3.1 and JSP 2.3 Specifications. Apache Tomcat 8.5.x is intended to replace 8.0.x and includes new features pulled forward from Tomcat 9.0.x. The minimum Java version and implemented specification versions remain unchanged.

Tomcat 9.x implements the Servlet 4.0 and JSP 2.3 Specifications.

Tomcat 10.0.x implements the Servlet 5.0 and JSP 3.0 Specifications.

Tomcat 10.1.x implements the Servlet 6.0 and JSP 3.1 Specifications.

A servlet container is basically an implementation of the Java servlet specification, which is mainly used for the purpose of hosting Java servlets.

The Java enterprise application-server is an implementation of the Java specification.

A web- server is a kind of server designed to serve files using a local system such as Apache.

We can say that, at the center, the Tomcat is JSP (Java Server Pages) and Servlet. The JSP is one of the server-side programming technologies that enables the developers to create platform-independent dynamic content and also known as the server-side view rendering technology. A servlet is a java-based software component that helps in extending the capabilities of a server. However, it can also respond to several kinds of requests and generally implemented web server containers to host the web-applications on the webservers. As the developer's point of view, we just have to write the java server pages (or JSP) or the servlet and not required to worry about routing; the Tomcat will handle the routing.

The Tomcat also consists of the webserver known as the Coyote engine due to which it's possible to extend the capability of Tomcat to include several java enterprise specs, and including the Java Persistence API(JPA). The Tomcat also has an extended version known as the "TomEE" that contains more enterprise features.

# 2.5 ORACLE DATABSE

Oracle database is a relational database management system (RDBMS) from Oracle Corporation. This article will explain a complete overview of the Oracle database, features, history, and editions. Before discussing the oracle, we will first need to know about the database.

Oracle database is a relational database management system. It is also called **OracleDB**, or simply **Oracle**. It is produced and marketed by **Oracle Corporation**. It was created in **1977** by **Lawrence Ellison** and other engineers. It is one of the most popular relational database engines in the IT market for storing, organizing, and retrieving data.

**Editions of Oracle database**

Oracle database is compatible with a wide range of platforms such as Windows, UNIX, Linux, and macOS. It supports several operating systems like IBM AIX, HP-UX, Linux, Microsoft Windows Server, Solaris, SunOS, macOS, etc. In the late **1990s**, Oracle began supporting open platforms like GNU/Linux.

**The following is a list of Oracle database editions in order of priority:**

- **Enterprise Edition:** It is the most robust and secure edition. It offers all features, including superior performance and security.
- **Standard Edition:** It provides the base functionality for users that do not require Enterprise Edition's robust package.
- **Express Edition (XE):** It is the lightweight, free and limited Windows, and Linux edition.
- **Oracle Lite:** It is designed for mobile devices.
- **Personal Edition:** It's comparable to the Enterprise Edition but without the Oracle Real Application Clusters feature.

Oracle Corporation is the largest software company to develop and markets computer software applications for business. The company is best known for its Oracle database products and, more recently, cloud products and services. Its relational database was the first to support SQL, which has since become the industry standard.

Oracle database is one of the most trusted and widely used relational database engines. The biggest rival of Oracle database is Microsoft's SQL Server.

The first commercially available RDBMS named **Oracle V2 (Version 2)** was built using PDP-11 assembler language (SQL-based RDBMS). Although they already developed a commercial RDBMS in 1977, it wasn't available for purchase until 1979, when Oracle version 2 was released.

# 3.SCREENS

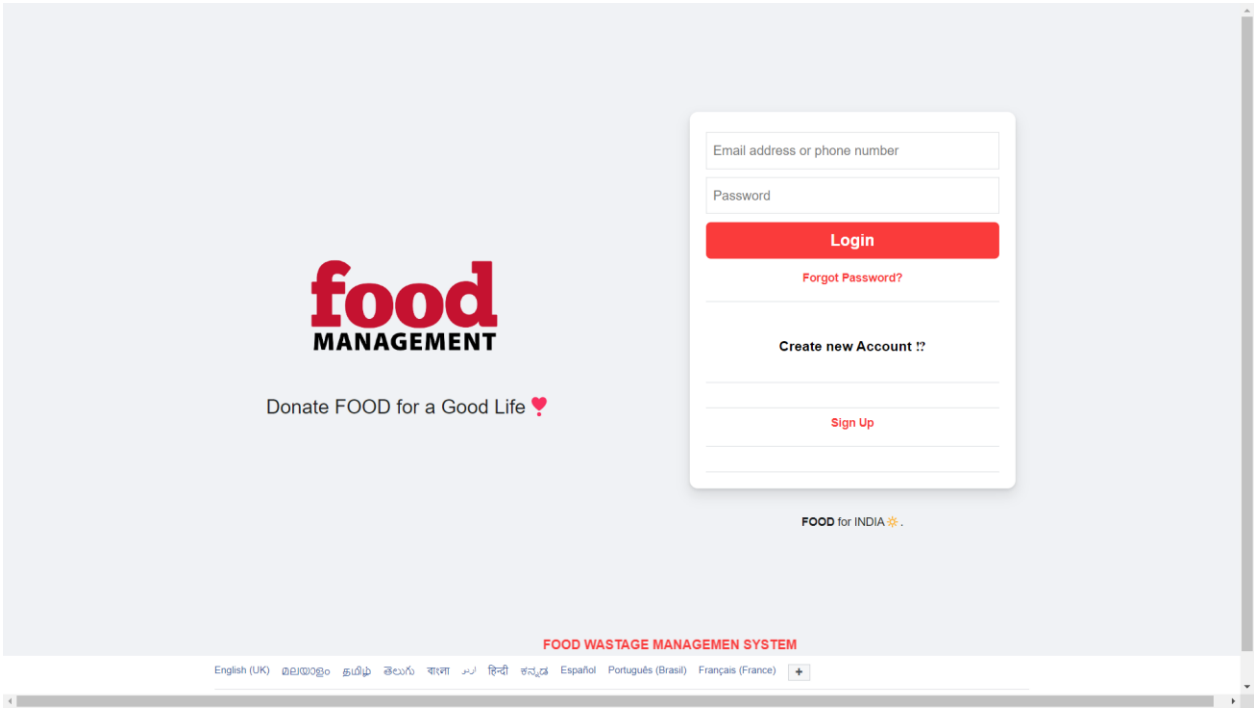



Fig 1: Login Page

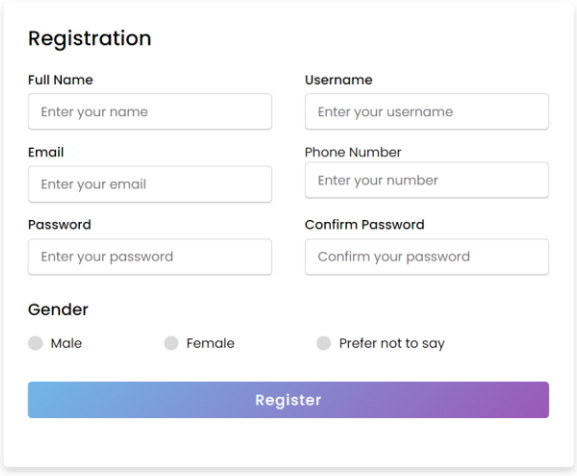



Fig 2: New User registration page

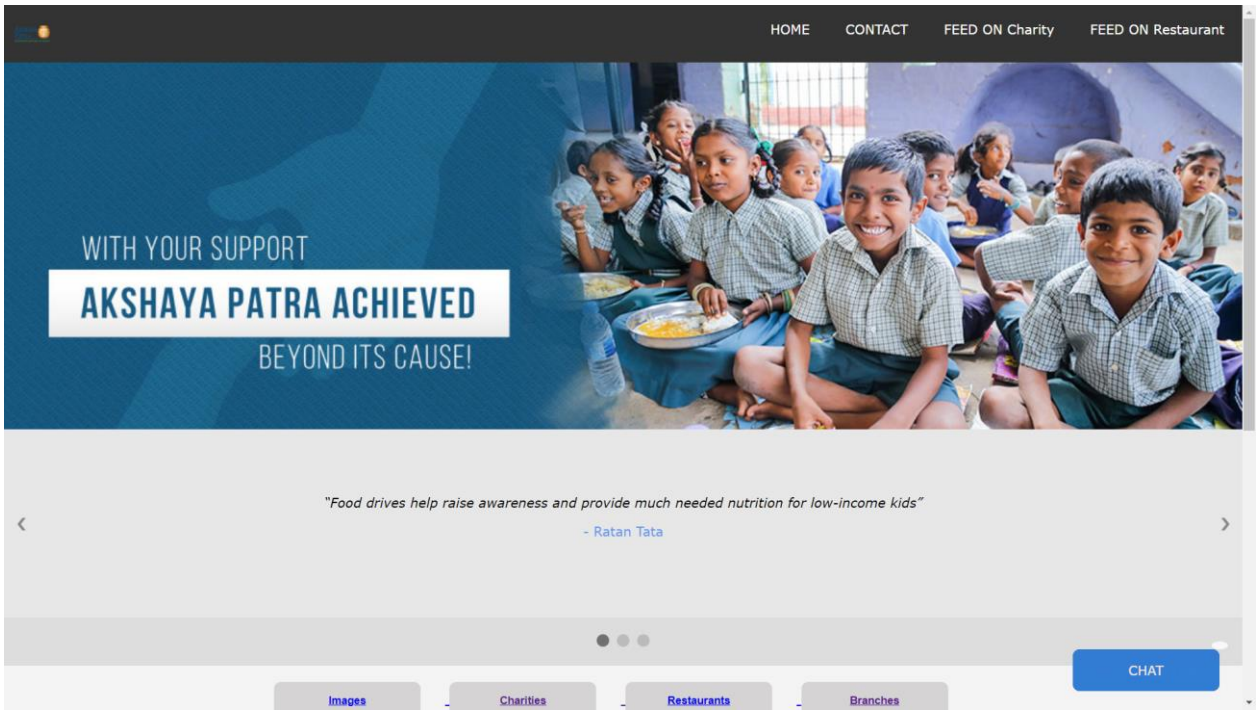



Fig 3: Home Page


Fig 4: Images

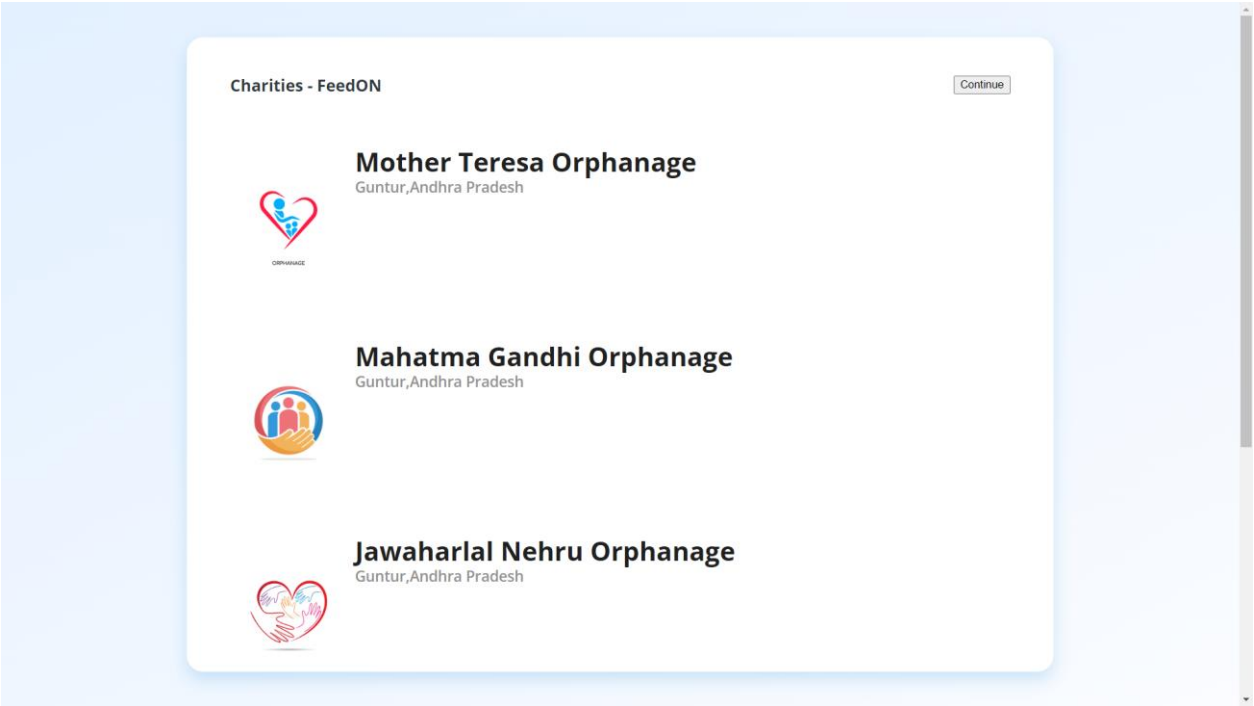



Fig 5: Registered Charities

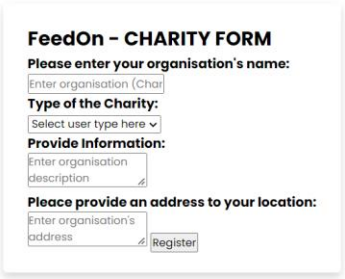



Fig 6: Registration form for new user

| NAME_INPUT | USER_TYPE | DESCRIPTION_INPUT | LOCATION_INPUT |
|---|---|---|---|
| nehru | Children | hello | tnl |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| gntttt | Adults | we need for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| gg | Children | we need 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| nnn | Adults | we need for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| welf | Children | we have food for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| india ap | Children | i need food for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| gannn | Children | food 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| ggg | Children | we need food for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| gandhi | Children | i need | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| boses | Children | i need food 20 | vij |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| bose | Children | hello | hyderabad |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| chs | Adults | we need | gnt |

Fig 7: Users list

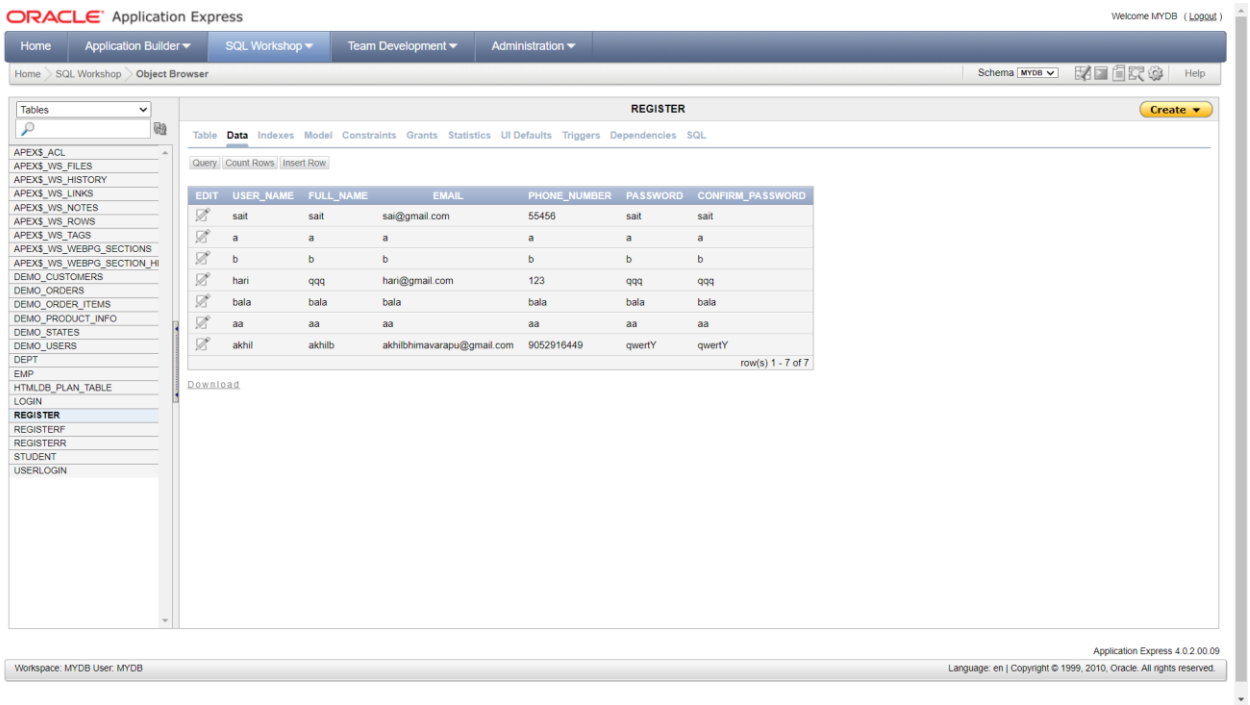



Fig 8: Database view

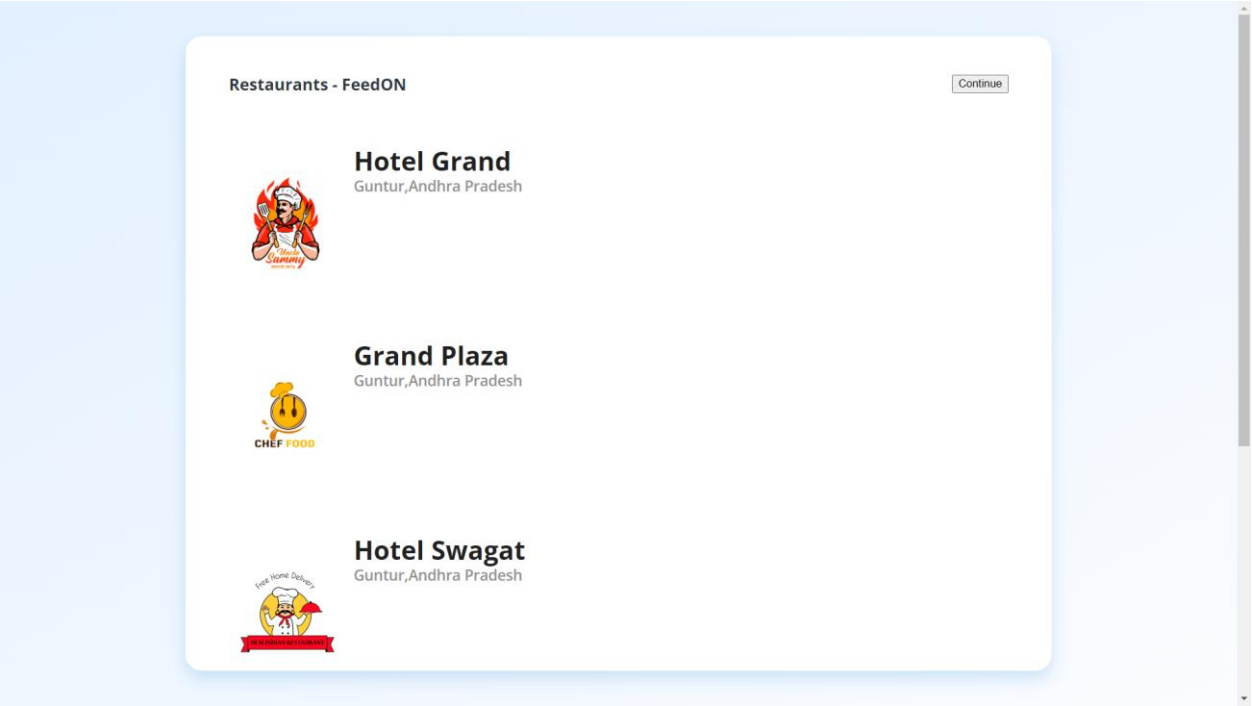



Fig 9: Registered Restaurants

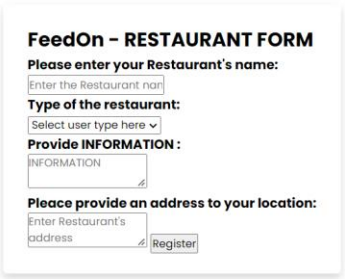



Fig 10: New user Registration form

| NAME_INPUT | USER_TYPE | DESCRIPTION_INPUT | LOCATION_INPUT |
|---|---|---|---|
| grand grannd | 3 STAR | we have food for 20 | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| guntur plaza | 3 STAR | i have food for 50 people | guntur |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| gutur grand | 3 STAR | food 50 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| grannnd | 3 STAR | i have food for 20 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| sasi rest | 5 STAR | i have food 50 | vij |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| granddddd | 3 STAR | we have food for 20 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| ggrnad | 3 STAR | we have food for 20 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| hotel a | 3 STAR | we have food for 20 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| granddddd | 3 STAR | we have for 20 ppl | gnt |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| hotel o | 3 STAR | we have for 20 | vij |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| hotelll | 5 STAR | h 20 | gny |
| **NAME_INPUT** | **USER_TYPE** | **DESCRIPTION_INPUT** | **LOCATION_INPUT** |
| hyd grand | 3 STAR | i have food for 50 ppl | vij |

Fig 11: Users list

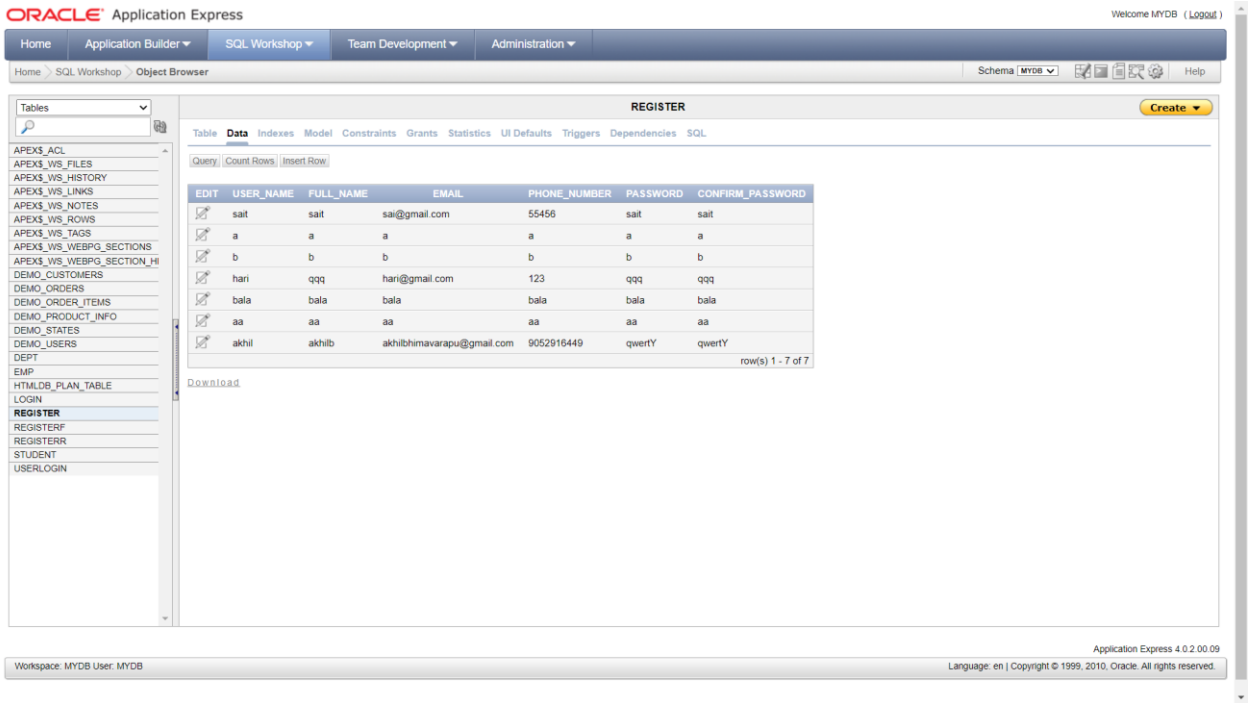



Fig 12: Database view

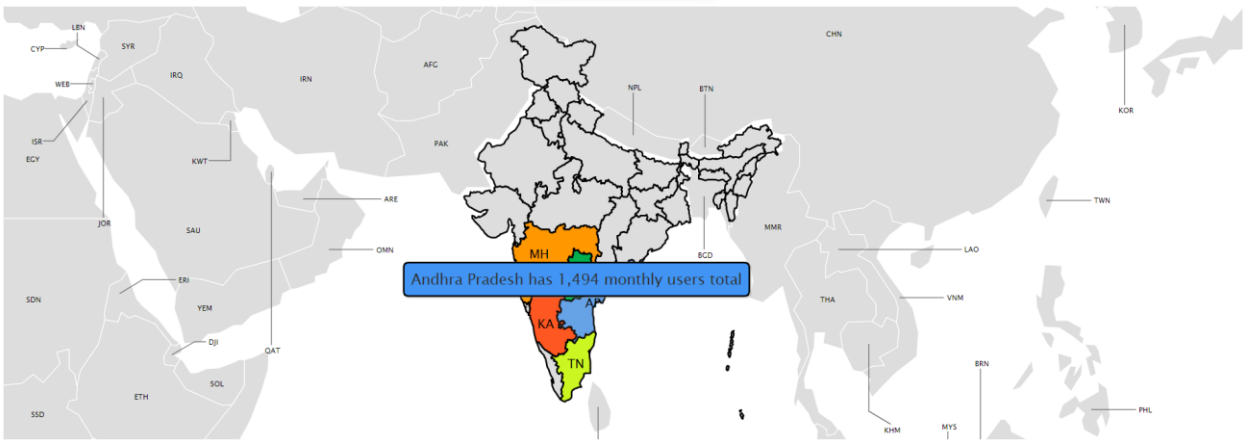



Fig 13: User list across Nation


Fig 14: News

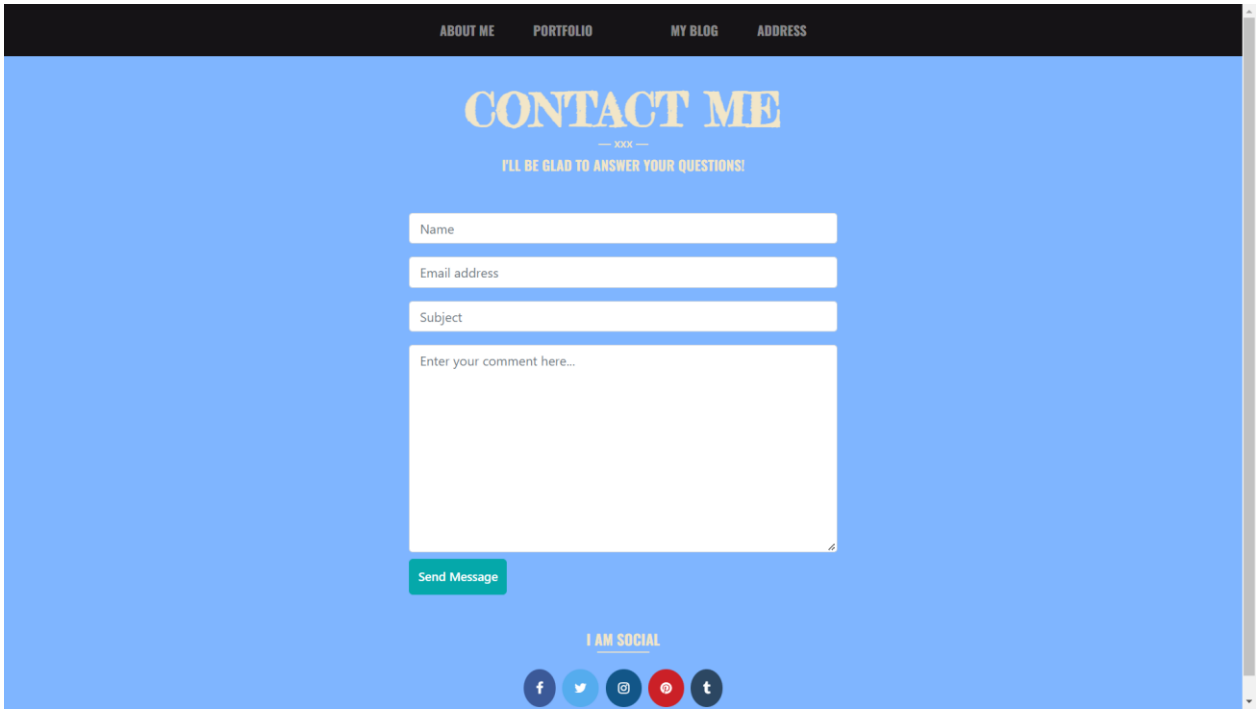



Fig 13: Contact support

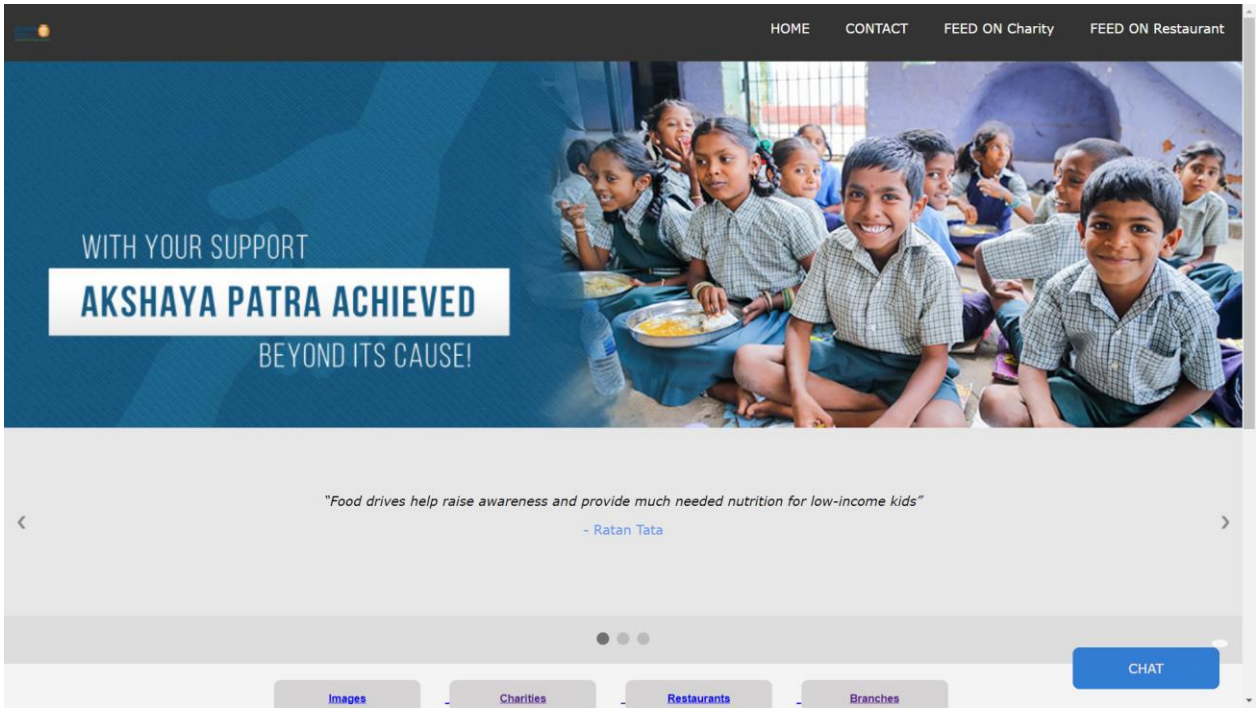



Fig 14: Return to Home page

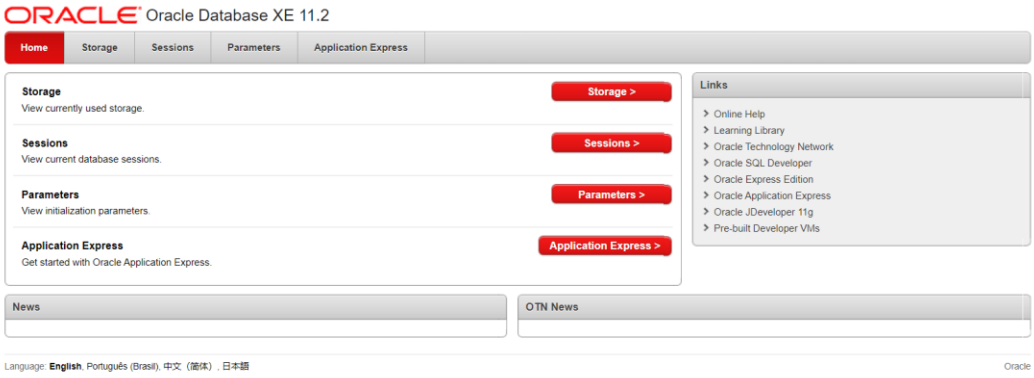



Fig 15: Oracle Database

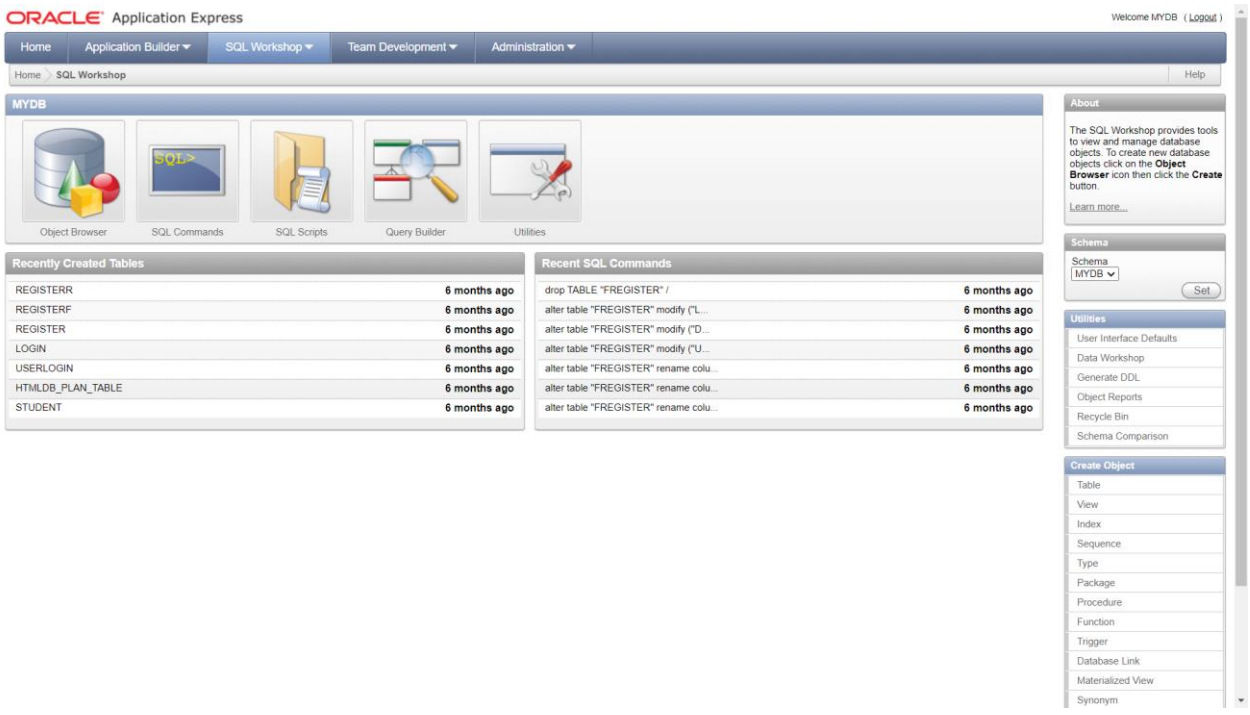



Fig 16: Database view

# 4. CONCLUSION

In this system, we have tried to reduce restaurant food wastage by giving waste food to NGOs. NGOs will raise a request, in case of any leftover food from restaurants. This request is sent to the restaurant manager of that particular restaurant. The NGO Manager then approves the request and assigns it to one of the employees for takeaway and forwards the request to the restaurant. The leftover food at the restaurant can be given to NGOs at the end of the day. The admin can track the history of restaurants and NGOs for the leftover foods.

This project is used to manage waste foods in a useful way. Every day people are wasting lots of food. So, we have to reduce that food wastage problem online. If anyone has wastage food, they are entering their food quantity details and their address in that application and then the admin maintains the details of the food donator. The donator can create the account and whenever they are having waste food they can log in and give a request to the admin. And the admin also maintains the buyer (orphanage, poor people,) details too. After the admin views the donator request and gives the alert message like the time to come and collect the food. And the admin collects food from the donator through their nearby agent and then provide it to the nearest orphanages or poor people.