

Software Requirement Specifications

Mini Market

(Grocery Item-Daily use products)

Diploma in Advance Computing (CDAC) from C-DAC, HYDERABAD

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INTRODUCTION

We have created an e-Commerce website where the user can buy various Grocery items(Daily use products)

E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace.

The objective of this project is to develop a general purpose e-commerce store where product like Grocery items can be bought from the comfort of home through the Internet. However, for implementation purposes, this paper will deal with an online shopping for Grocery items.

An online store is a virtual store on the Internet where customers can browse the catalogue and select products of interest. The selected items may be collected in a shopping cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill or select a billing address, a shipping address, a shipping option, and payment information such as credit card number.

DESCRIPTION

- Any member can register and view available products.
- Only registered member can purchase multiple products regardless of quantity.
- ContactUs page is available to contact Admin for queries.
- There are three roles available: Visitor, User and Admin.
 - Visitor can view available products.
 - User can view and purchase products.
 - An Admin has some extra privilege including all privilege of visitor and user.
 - ✓ Admin can add products, edit product information and add/remove product.
 - ✓ Admin can add user, edit user information and can remove user.

PROJECT SCOPE:

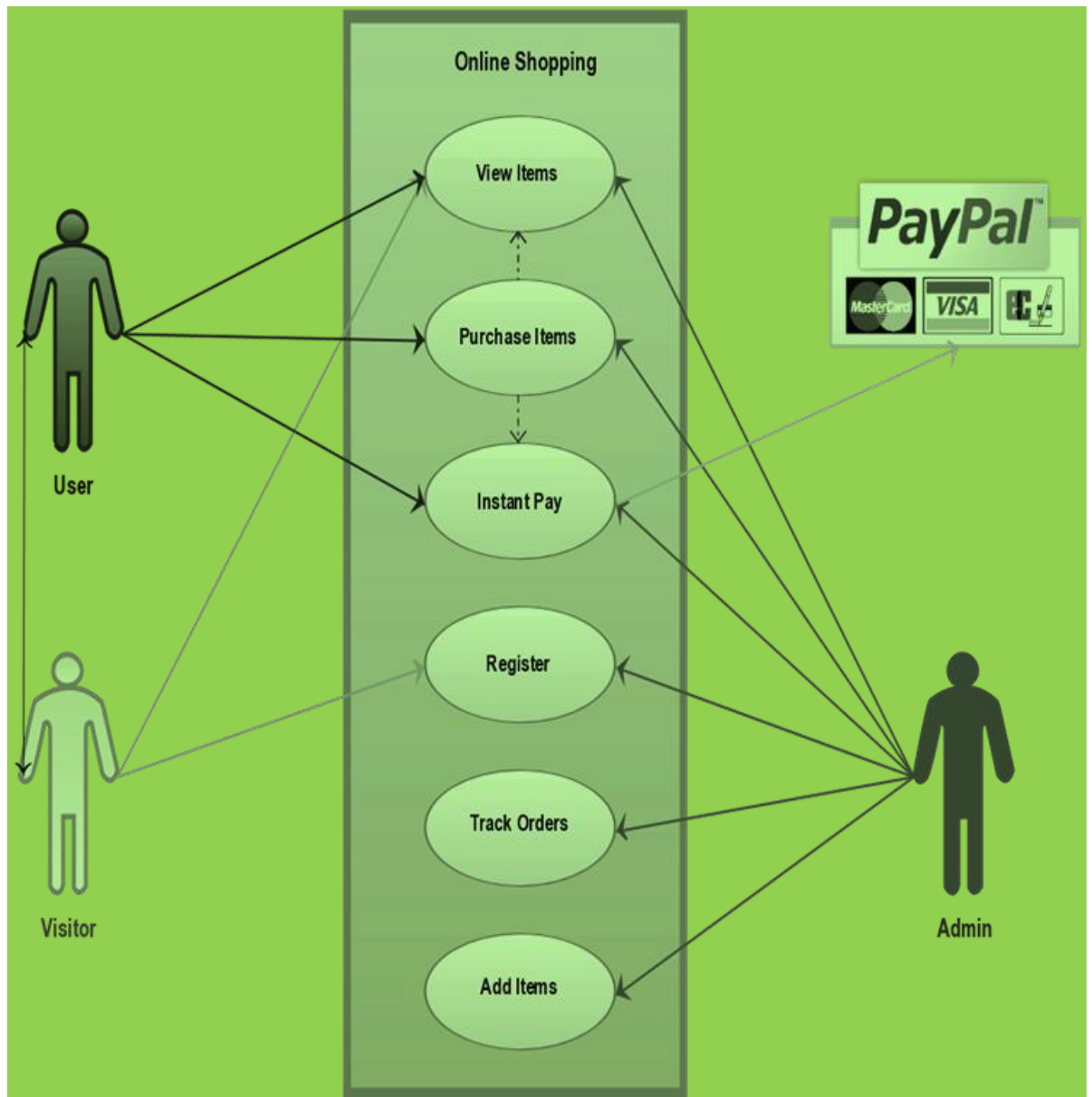
Online grocery shopping attempts to enhance admittance to care and improve the continuousness and good organization of services. Depends on the particular setting and local case executives are responsible for a diversity of tasks, position from linking clients to the services to really providing intensive shop and delivery facilities themselves.

Online Shopping of Grocery item can be implemented to any shop in the locality or to multinational branded shops having retail outlet chains. The system recommends a facility to accept the orders 24*7 and a home delivery system which can make customers happy.

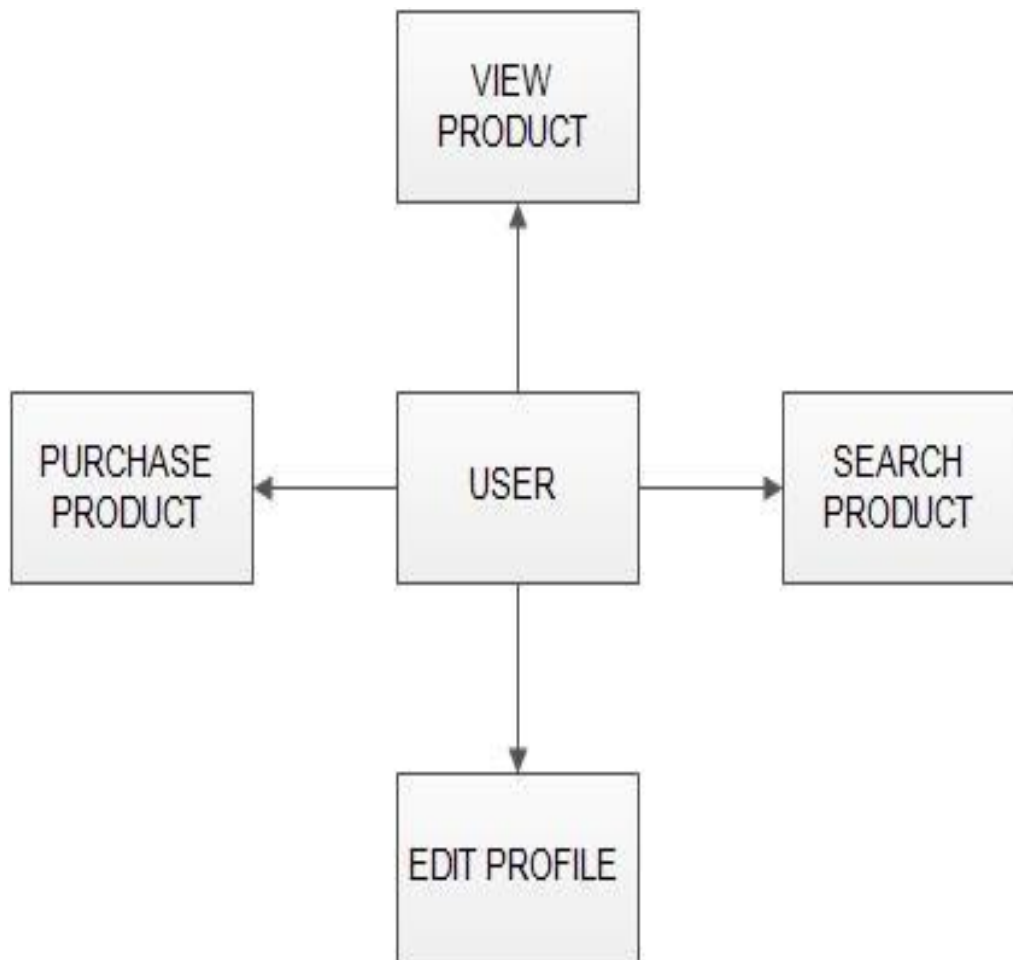
Web Pages details:

- Home Page
- AboutUs Page
- Clothing Page
- OrderUs Page
- ContactUs Page
- Admin Page
- Login Page
- Register Page
- Track

USE-CASE DIAGRAM



USERS:



ONLINE SHOPPING APPLICATION:

Anyone can view Online Shopping portal and available products, but every user must login by his/her Username and password in order to purchase or order products. Unregistered members can register by navigating to registration page. Only Admin will have access to modify roles, by default developer can only be an 'Admin'. Once user register site, his default role will be 'User'.

HOMEPAGE:

The Home Screen will consist of screen were one can browse through the product

GROCERY ITEM PAGE (PRODUCTS):

This page consists of product details. This page appears same for both visitors and users.

Order Us Page:

Registered users can order desired products from here

Contact Us Page:

Visitors and Registered users can contact website owners or administrators From here.

ABOUT US PAGE:

This page describes about website and owners.

Track For Admin Page:

Website Administrators can track and ship orders here

Registration

A new user will have to register in the system by providing essential details in order to view the products in the system. The admin must accept a new user by unblocking him.

➤ Login

A user must login with his user name and password to the system after registration.

➤ View Products

User can view the list of products based on their names after successful login. A detailed description of a particular product with product name, products details,

product image, price can be viewed by users.

- Search Product

Users can search for a particular product in the list by name.

- Add to cart:

The user can add the desired product into his cart by clicking add to cart option on the product.

He can view his cart by clicking on the cart button. All products added by cart can be viewed in the cart. User can remove an item from the cart by clicking remove

- Submit Cart:

After confirming the items in the cart the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.

- History

In the history the user will have a view of pending orders.

- Edit Profile

The user can view and edit the profile.

Admin Page:

Only difference you see in this page is Role: Admin. User and Admin role will be checked once the page was login and Session [“role”] will be either Admin or User. If credentials belong to Admin then role will be Admin and if credentials belong to User then role will be User

PAYMENT: Once users orders products they are redirected to payment page.

SYSTEM TOOLS :

The various system tools that have been used in developing both the frontend and the back end of the project are being discussed in this chapter

Technology-

- HTML5 and CSS3: Semantic Elements, CSS Grid, Flexbox
- React: Components, Props, Events, Hooks, Router, Axios
- Context API: Store, Reducers, Actions
- Node & Express: Web API, Body Parser, File Upload, JWT
- MongoDB: Mongoose, Aggregation
- Development: ESLint, Babel, Git, Github,
- Deployment: Heroku

FRONT END:

CSS, React.js are utilized to implement the frontend.

React.js

React is a great JavaScript framework to build an e-commerce web app. It has a big & active community, is component-based, supports server-side rendering, uses virtual DOM, just to mention a few. These features make React. js the perfect choice for a fast, scalable, and user-friendly e-commerce website

CSS (Cascading Style Sheets)

CSS is a style sheet language used for describing the look and formatting of a document written in a markup language.

BACK END

Node and Express

Express is a node js web application framework that provides broad features for building web and mobile applications. It is used to build a single page, multipage, and hybrid web application.

MongoDB

The back end is implemented using MongoDB which is used to design the databases.

MongoDB is a document database for easy creation and scaling. Documents are created and stored in BSON (Binary JSON) format. Thanks to the use of JSON, it's very easy to convert the queries and results into a format that can “understand” the frontend code of the e-commerce application

Data Management

Data Description

This database consists of

- Users: User and Admin information is added to database with Unique ID based on their roles.
- Shopping: Complete products information is stored in this table.
- Orders: Customer ordered products, status and delivery information is stored in this table.

Data Objects

- User: ID, UserName, Password, Email, Role
- Shopping: ID, Product, Product ID, Cost, Category, Image, Description
- Orders: ID, Client, Product, Quantity, Price, Date, OrderShipped

DATA FLOW DIAGRAM

A Data Flow Diagram (DFD) is a structured analysis and design tool that can be used for flowcharting. A DFD is a network that describes the flow of data and the processes that change or transform the data throughout a system. This network is constructed by using a set of symbols that do not imply any physical implementation.

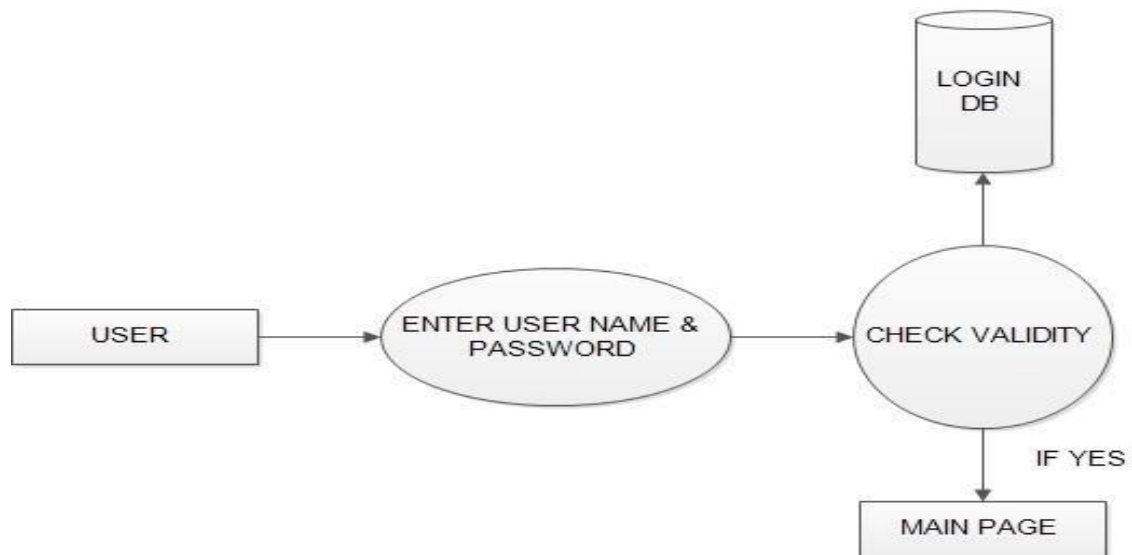
It has the purpose of clarifying system requirements and identifying major transformations. So it is the starting point of the design phase that functionally decomposes the requirements specifications down to the lowest level of detail. DFD can be considered to an abstraction of the logic of an information-oriented or a process-oriented system flow-chart. For these reasons DFD's are often referred to as logical data flow diagrams.

DATAFLOW:

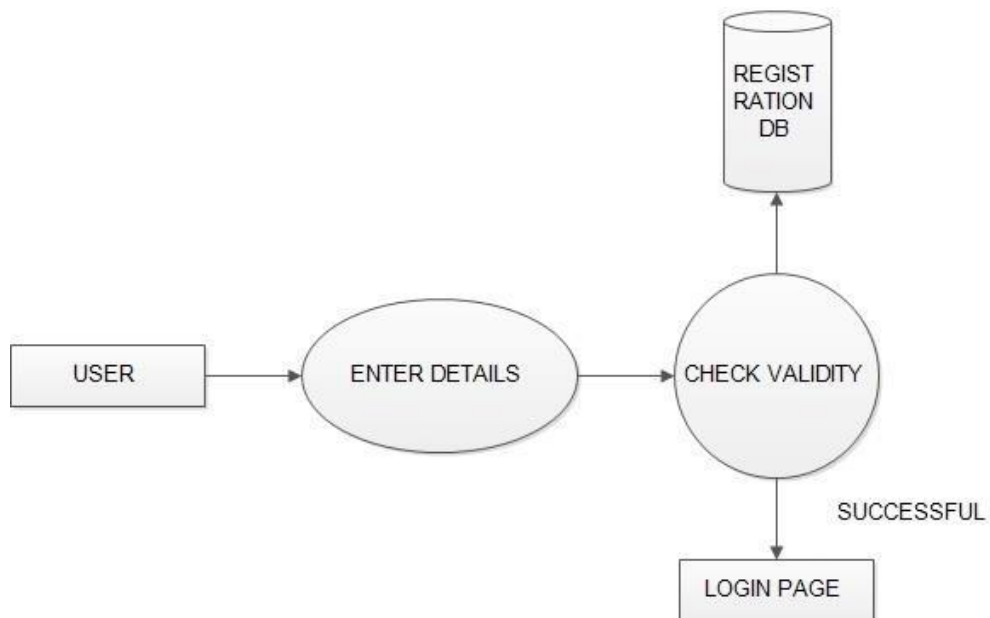
The data flow shows the flow of information from a source to its destination.

Data flow is represented by a line, with arrowheads showing the direction of flow. Information always flows to or from a process and may be written, verbal or electronic. Each data flow may be referenced by the processes or data stores at its head and tail, or by a description of its contents.

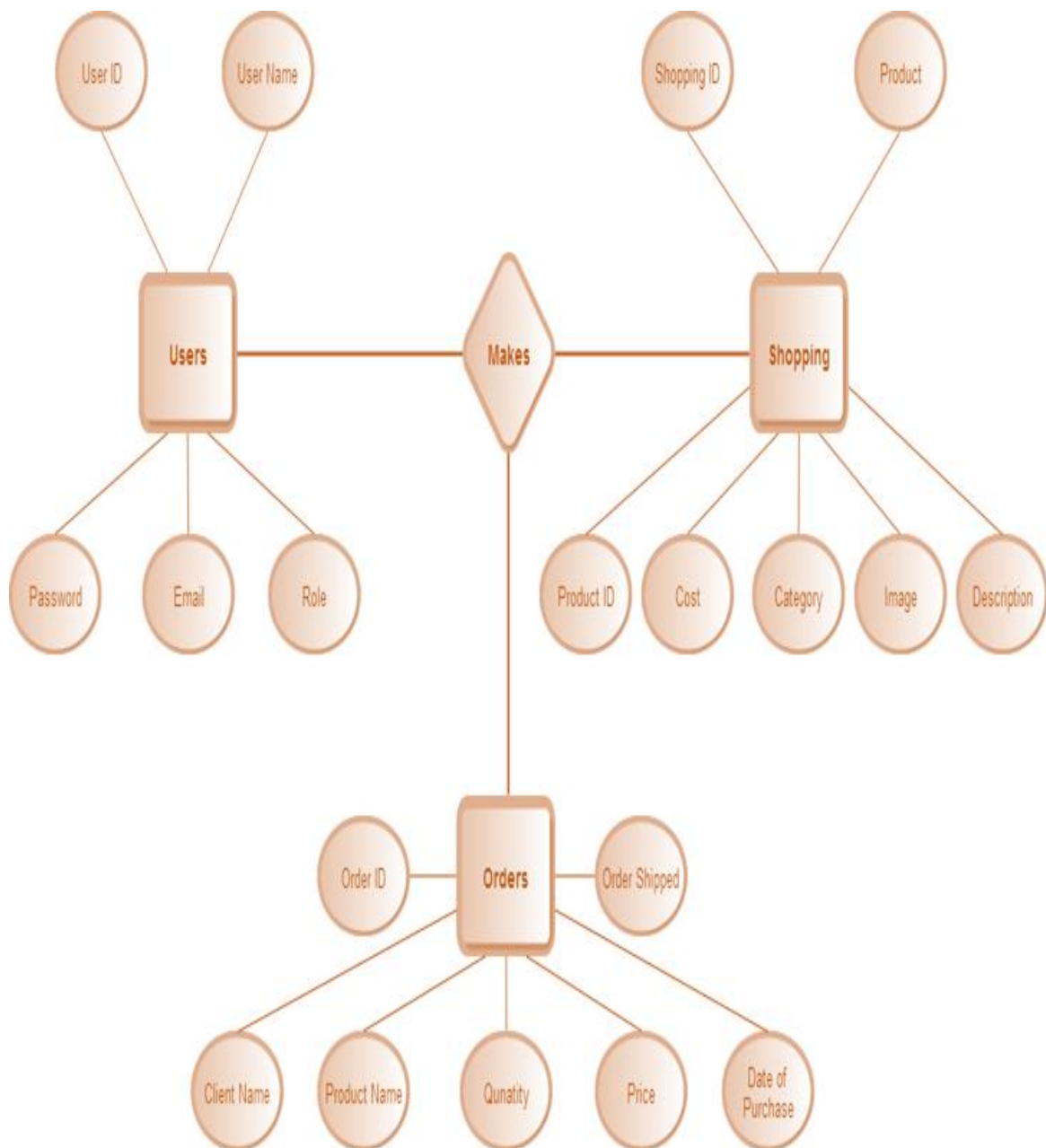
Login DFD



REGISTRATION DFD



Design and Implementation of E-Commerce Site for Online Shopping



Non-Functional / Operational Requirements

Security

- Pages of the website must be access in the way they were intended to be accessed.

Included files shall not be accessed outside of their parent file.

- Administrator can only perform administrative task on pages they are privileged to access. Customers will not be allowed to access the administrator pages.

Efficiency and Maintainability

- Page loads should be returned and formatted in a timely fashion depending on the request being made.
- Administrators will have the ability to edit the aspects of the order forms, product descriptions, prices and website directly

Conclusion:

The Internet has become a major resource in modern business, thus electronic shopping has gained significance not only from the entrepreneur's but also from the customer's point of view. For the entrepreneur, electronic shopping generates new business opportunities and for the customer, it makes comparative shopping possible.

A good shopping cart design must be accompanied with user-friendly shopping cart application logic. It should be convenient for the customer to view the contents of their cart and to be able to remove or add items to their cart. The shopping cart application described in this project provides a number of features that are designed to make the customer more comfortable