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SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

FARMART- Online Platform for Buying Farming Essentials

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ABSTRACT

Our life depends heavily on agriculture. The majority of people in India work in agriculture because it is the foundation of our country's economy. Farmers have always been reliant on various individuals for various resources.

Therefore, a gateway that incorporates all of a farmer's demands while allowing them to be independent of others appears to be a superior approach to make their life simple and straightforward. a marketplace where farmers may buy anything they need, such as seeds, fertilizers, insecticides, agricultural equipment, etc. A website that offers seasonal guidance systems to farmers.

INTRODUCTION

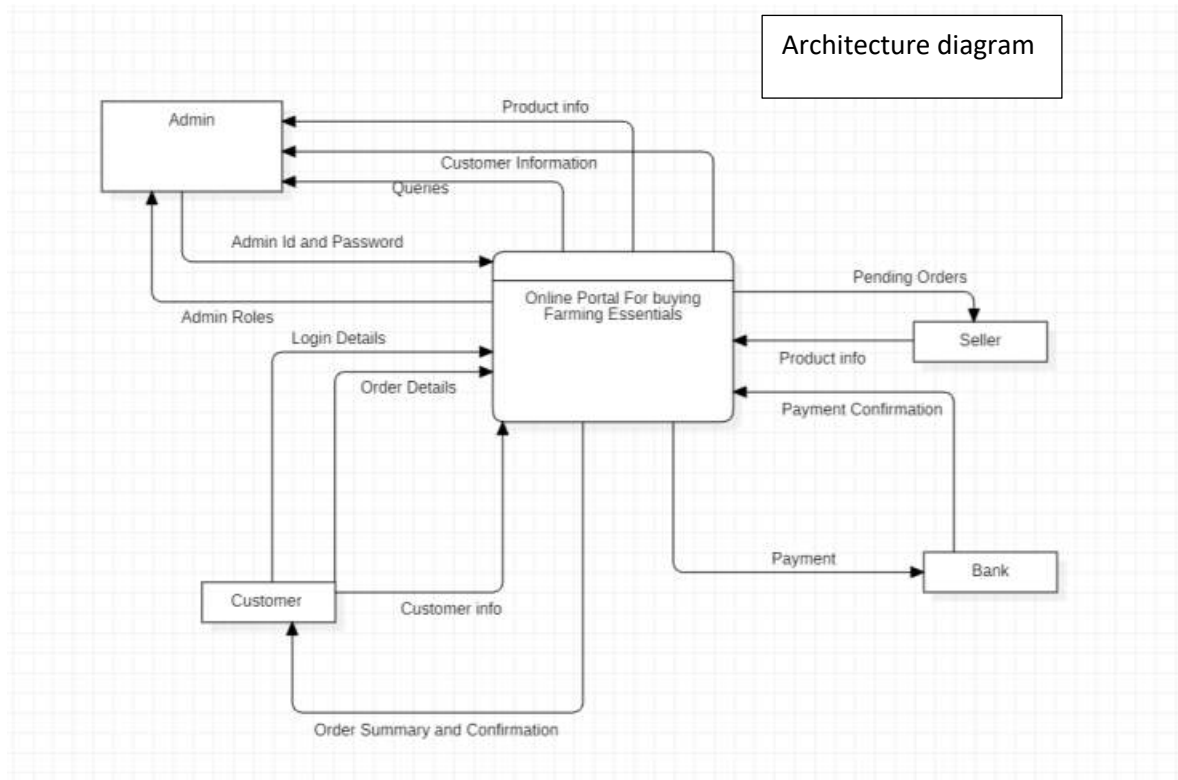
22nd century, an era where everything is getting digitalized. In the era of smartphones and online portals, we are coming up with an e-commerce site for farmers which will help them to get all the necessary items in one place and they won't have to travel around in search of the items. The items include fertilizers, pesticides, crops, seeds, agricultural equipment's etc. This e-commerce website would follow the algorithm of any other e-commerce platform like amazon, flip kart, eBay etc. It would save money, time and unnecessary hassles and would also help in the commercialization and digitalization of the agricultural industry. Agriculture sector contributes 19.9 percent to GDP so the ecommerce site would indirectly help in development of country.

The main aim of project is to build a user-friendly software that makes whole process of buying farming equipment's, fertilizers, crops and pesticides, etc. easier with secure money transactions. We will be coming up with a farming products website which is robust and integrated technology where all the farming necessities will be available at reasonable rates. Often, farmers get manipulated or the money gets shared within the supply chain by the business people who have the upper hand. Sometimes it also gets difficult to deliver within the required time period. Besides, all these deliveries take place informally which involves a lot of risks including the authenticity of the products. Having an ecommerce website would also ensure authenticity.

In an effort to improve the site's usability, we incorporated seasonality as one of the factors for the recommendation system.

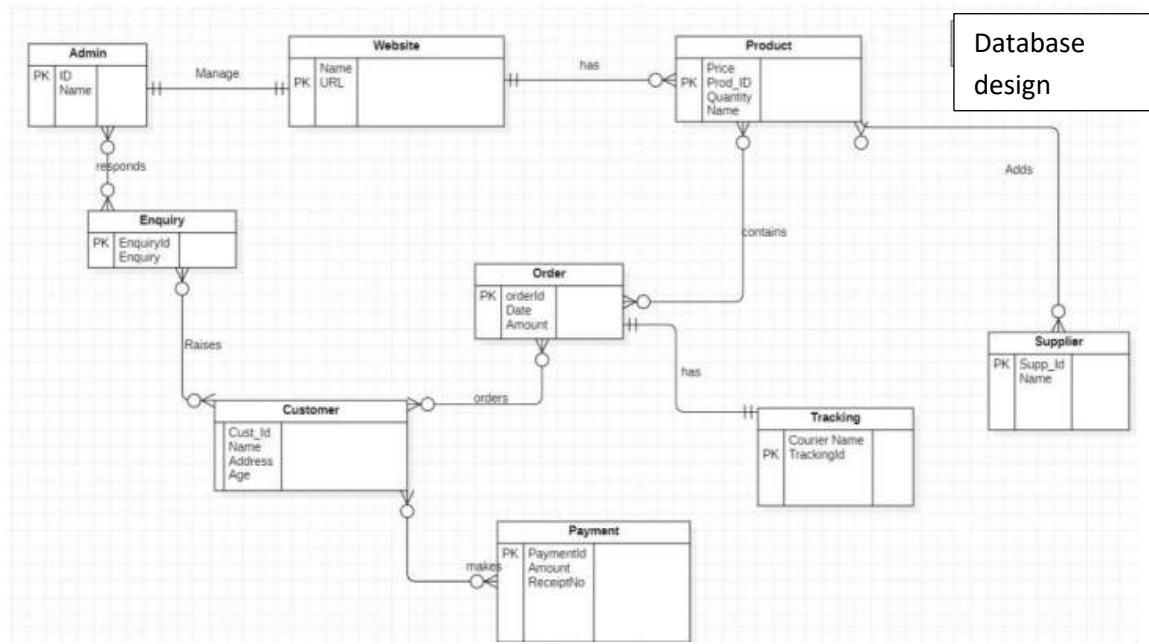
ARCHITECTURE DIAGRAM

An architecture diagram for FARMKART would illustrate the high-level structure of the online platform, showcasing components such as user interfaces, application servers, databases, external APIs, and their interactions. It provides a visual representation of how different modules and services are organized to support seamless transactions and user experiences in the context of an online platform for purchasing farming essentials.



DATA BASE DESIGN

The database design for FARMKART involves creating a blueprint for storing and managing data related to farming essentials. This includes defining tables for products, users, orders, and other relevant entities. Relationships between these entities, such as the association between users and their orders, are established to ensure efficient data organization. The design would also consider factors like normalization to minimize redundancy and dependency, contributing to a robust and scalable database system for the platform.



MODULE DESCRIPTION

User Authentication and Management:

Manages user registration, login, and profile management. Ensures secure access to the platform and maintains user-related information.

Product Catalog Management:

Handles the addition, update, and removal of farming essentials in the product catalog. Includes features for categorization, pricing, and detailed product information.

Shopping Cart and Checkout:

Facilitates the selection of products by users, managing their shopping cart, and guiding them through the checkout process. Handles order creation and confirmation.

Order Processing and Fulfillment:

Manages the processing of orders, including inventory updates, order status tracking, and coordination with suppliers for timely fulfillment.

Payment Gateway Integration:

Integrates secure payment gateways to facilitate online transactions, ensuring a smooth and safe payment process for users.

User Reviews and Ratings:

Enables users to leave reviews and ratings for products, fostering a community-driven feedback system to assist others in making informed purchasing decisions.

Recommendation Engine:

Utilizes data analytics to provide personalized product recommendations based on user preferences, purchase history, and trending items in the agriculture sector.

Admin Dashboard:

A centralized dashboard for administrators to manage users, monitor transactions, track inventory, and access analytics for business intelligence.

Supplier Management:

Manages relationships with suppliers, including onboarding, product catalog integration, and inventory updates to ensure a reliable and up-to-date supply chain.

Reporting and Analytics:

Generates reports and analytics on key performance indicators, sales trends, and user behavior to inform strategic decision-making and optimize the platform's performance.

Mobile App Interface:

Develops and maintains a user-friendly mobile application interface to enhance accessibility and provide a seamless experience for users on various devices.

Notification and Communication:

Manages communication with users through notifications, alerts, and newsletters, keeping them informed about promotions, order status, and relevant updates.

Order Tracking and Shipment Management:

Allows users to track the status of their orders in real-time, providing visibility into the entire fulfillment process. Integrates with shipment carriers to provide accurate delivery estimates and updates.

Inventory Tracking and Management:

Monitors and manages the inventory of farming essentials in real-time. Notifies administrators and suppliers about low stock levels, facilitating timely restocking to prevent product unavailability.

Delivery Confirmation and Feedback:

Confirms successful product delivery and prompts users to provide feedback on the delivery experience. This information can be used to assess and enhance the efficiency of the delivery process.

SAMPLE CODE

Web Server: Operating System(any), Apache 2

Scripting languages:

- **HTML - VS Code**
- **PHP- phpMyAdmin**
- **JavaScript -VS Code**
- **CSS- Vs Code**

Database: MySQL

EXPLORE PAGE WITH SEARCH

```
<!DOCTYPE html>
<html>

<head>
<title>Explore</title>
<style>
<?php include "explore.css" ?>
</style>

<?php require_once('header.php'); ?>

<?php
function findseason($x)
{
if ($x >= 4 && $x <= 6) { return "summer";
} elseif ($x == 11 || $x == 12 || $x == 1) { return "winter";
} elseif ($x == 2 || $x == 3) {

return "spring";
} else {
return "rainy";
}
} ?>

<div class="offer-heading">
<h1>Our Products</h1>
</div>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "farmkartdb";

$conn = new mysqli($servername, $username, $password, $dbname); if ($conn->connect_error)
{
die("Connection failed: " . $conn->connect_error);
}
$limit = 20;

$query = "SELECT * FROM `products`";
$result = mysqli_query($conn, $query); if ($result)
```



```

{
$total_rows = mysqli_num_rows($result); mysqli_free_result($result);
}

$total_pages = ceil($total_rows / $limit);

if (isset($_GET["page"])) {
$page_number = $_GET["page"];
} else {
$page_number=1;
}

$initial_page = ($page_number-1) * $limit;

$getQuery = "SELECT * FROM `products` LIMIT $initial_page, $limit";

$result = mysqli_query ($conn, $getQuery); ?>

<div class="products">
<?php
while ($row = mysqli_fetch_array($result))
{
?>
<form method="post" action="add_to_cart.php">
<div class="product">
<div class="img-div">
" alt="Image">
</div>

$row["id"] ?>">

$row["name"] ?>">

$row["image_link"] ?>">

$row["price"] ?>">

<div class="tag-name">
<?php if ($row["quantity"] > 0) { ?>
<i class="fas fa-shopping-cart"></i>
<button type="submit" name="add">Add To Cart</button>
<input type="hidden" name="p_id" value="<?php echo

<input type="hidden" name="p_name" value="<?php echo

<input type="hidden" name="p_image" value="<?php echo

<input type="hidden" name="p_price" value="<?php echo

<?php } else { ?>
<span style="cursor: default;">Out Of Stock</span>

```

```

<?php } ?>
</div>
<div class="name">
<p><?php echo $row["name"] ?></p>
<p><?php echo "Rs. " . $row["price"] ?></p>
</div>
</div>

</form>
<?php
} ?>
</div>
<div class="items">

<?php

$pageURL = ""; if($page_number>=2){
echo "<a href='Explore.php?page=" . ($page_number-1) . "'> Prev </a>";

}

for ($i=1; $i<=$total_pages; $i++) {

</a>";

if ($i == $page_number) {
$pageURL .= "<a class = 'active' href='Explore.php?page=" . $i . "'>".$i."
}

else {
$pageURL .= "<a href='Explore.php?page=" . $i . "'>".$i." </a>";
}

};

echo $pageURL; if($page_number<$total_pages){
echo "<a href='Explore.php?page=" . ($page_number+1) . "'> Next </a>";

} ?>
</div>
<div class="inline">

<input id="page" type="number" min="1" style="height: 34px;" max="<?php echo
$total_pages?>" placeholder="<?php echo $page_number."/". $total_pages; ?>" required>

<button style="height: 34px;" onClick="go2Page();">Go</button>

</div>

<?php
$dbhost = 'localhost';

```

```

$dbname = 'farmkartdb';
$dbuser = 'root';
$dbpass = '';

try {
    $pdo = new PDO("mysql:host={$dbhost};dbname={$dbname}", $dbuser, $dbpass);
    $pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
} catch (PDOException $exception) {
    echo "Connection error : " . $exception->getMessage();
}

$currentmonth = date('m');
$sea = findseason($currentmonth); ?>
<div class="offer-heading">
<h2>Recommended Seeds</h2>
<h3>Recommendation based on the season</h3>
</div>
<div class="products" style="margin-bottom: 70px;">
<?php
    $statement = $pdo->prepare("SELECT * FROM products WHERE season=?");
    $statement->execute(array($sea));
    $result = $statement->fetchAll(PDO::FETCH_ASSOC); foreach ($result as $row) {
    ?>
    <form method="post" action="add_to_cart.php">
    <div class="product">
    <div class="img-div">
    " alt="Image">
    </div>

    ?>">

    $row["name"] ?>">

    $row["image_link"] ?>">

    $row["price"] ?>">

    <div class="tag-name">
    <?php if ($row["quantity"] > 0) { ?>
    <i class="fas fa-shopping-cart"></i>
    <button type="submit" name="add">Add To Cart</button>
    <input type="hidden" name="p_id" value="<?php echo $row["id"]

    <input type="hidden" name="p_name" value="<?php echo

    <input type="hidden" name="p_image" value="<?php echo

    <input type="hidden" name="p_price" value="<?php echo

    <?php } else { ?>
    <span style="cursor: default;">Out Of Stock</span>
    <?php } ?>

</div>

```

```

<div class="name">
<p><?php echo $row["name"] ?></p>
<p><?php echo "Rs. " . $row["price"] ?></p>
</div>
</div>
</form>
<?php } ?>
</div>

<?php require_once('footer.php'); ?>
<script type="text/javascript"> function go2Page()
{
var page = document.getElementById("page").value;

page = ((page<?php echo $total_pages; ?>)?<?php echo $total_pages;
?>:((page<1)?1:page));

window.location.href = 'Explore.php?page='+page;
}
</script>

<style>

```

HEADER AND NAVIGATION

```

<?php include "header.css" ?>
</style>

<script src="https://kit.fontawesome.com/2cf05c34d2.js" crossorigin="anonymous"></script>
</head>

<body>
<div class="topnav">
<a class="active" href="Explore.php"></a>
<div class="user-dropdown">
<a href="#"><i class="fas fa-user"></i></a>
<div class="user-dropdown-content">
<a href="profile.php">Your Account</a>
<a href="Order_history.php">Your Orders</a>
<a href="Contact_Form.php">Contact Us</a>
<a href="logout.php">Log Out</a>
</div>
</div>
<a style="pointer-events: none;">|</a>
<a href="Cart.php"><i class="fas fa-shopping-cart"></i></a>
<form role="search" action="search_result.php" method="get">
<button type="submit" class="search-button"><a href="#"><i class="fas fa-search"></i></a></button>
<input type="search" placeholder="Search..." name="search_text" required>
</form>
</div>
<div class="bottom-nav">

```

```

<a href="Explore.php" class="home-nav">Home</a>
<div class="dropdown">
<button class="dropbtn">Seeds <i class="fa fa-caret-down"></i></button>
<div class="dropdown-content">
<div class="second-level-dropdown">
<button class="dropbtn">Flower Seeds <i class="fa fa-caret-

right"></i></button>

<div class="dropdown-content second-dropdown-content">
<a href="Flower.php">Flower's Hybrid Seeds</a>
<a href="Flower.php">Petunia Garden Mixed Flower Seeds</a>
<a href="Flower.php">GoldSmith/SFlowers</a>
</div>

</div>
<div class="second-level-dropdown">
<button class="dropbtn">Vegetable Seeds <i class="fa fa-caret-

right"></i></button>

<div class="dropdown-content second-dropdown-content">
<a href="Seeds.php">Vegetable's Hybrid Seeds</a>
<a href="Seeds.php">Hybrid Papaya Seeds</a>
<a href="Seeds.php">Leafy Veggies</a>
<a href="Seeds.php">Exotic Vegetable Seeds</a>
<a href="Seeds.php">Microgreen Seeds</a>
</div>

</div>
<a href="Fruit.php">Fruit Seeds</a>
</div>
</div>
<div class="dropdown">
<button class="dropbtn">Plant Protection <i class="fa fa-caret-down"></i></button>
<div class="dropdown-content">
<a href="Pest.php">Pesticides</a>
<a href="Pest.php">Insecticides</a>
<a href="Pest.php">Water Soluble Fertilizers</a>
<a href="Pest.php">Organic Products</a>
<a href="Pest.php">Bactericides</a>
</div>
</div>
<a href="Fruit.php">Fruit Seeds</a>
<a href="Tools.php">Tools and Machinery</a>
</div>

```

CART PAGE

```
<!DOCTYPE html>
<html>

<head>
<title>Cart</title>
<style>
<?php include "cart.css" ?>
</style>

<?php require_once('header.php');

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "farmkartdb";

$conn = new mysqli($servername, $username, $password, $dbname); if ($conn->connect_error)
{
die("Connection failed: " . $conn->connect_error);
}

$subtotal = 0;
$getQuery = "SELECT * FROM `cart`";
$result = mysqli_query ($conn, $getQuery); ?>

<div class="cart-container">
<div class="cart-div">
<div class="header">
<h3 class="heading">Shopping Cart</h3>
<div class="action">
<form action="removeall.php" >
<button type="submit" class="remove" style="color: red">Remove all</button>
</form>
</div>
</div>

<?php if (mysqli_num_rows($result)) { ?>

<div class="container">
<section id="cart">
<?php
while ($row = mysqli_fetch_array($result)) {

$pid = $row["id"];
$sql = "SELECT * FROM products WHERE id = $pid";
$res = mysqli_query ($conn, $sql);
while ($prod = mysqli_fetch_array($res)) {
$pquan = $prod["quantity"];
} ?>
<article class="product">
<header>
<a>" alt="crop" /></a>
```

```

</header>

<div class="content">
<h1><?php echo $row["name"] ?></h1>
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Soluta, numquam quis
perspiciatis ea ad omnis provident laborum dolore in atque.
</div>

<div class="footer-content">
<?php $quan = $row["quantity"];
$price = $row["price"];
$totalprice = $price * $quan;
$subtotal += $totalprice; ?>
<form method="post" action="">

<button type="submit" name="minusButton" class="qt-minus">-</button>
<input type="hidden" name="id-Value" value="<?php echo $pid ?>">
<input type="hidden" name="quan-Value" value="<?php echo $quan ?>">
</form>
<span class="qt"><?php echo $quan ?></span>
<form method="post" action="">
<button type="submit" name="plusButton" class="qt-plus">+</button>
<input type="hidden" name="id-value" value="<?php echo $pid ?>">
<input type="hidden" name="quan-value" value="<?php echo $quan ?>">
<input type="hidden" name="pquan-value" value="<?php echo $pquan ?>">
</form>
<h2 class="full-price"><?php echo "Rs. " . $totalprice ?></h2>

<h2 class="price"><?php echo "Rs. " . $price ?></h2>
</div>
<div class="buttons">
<form method="post" action="">
<div style="top: 8px" class="delete">
<button type="submit" name="deleteButton"><i class="fas fa-trash-alt icon-
large"></i></button>
<input type="hidden" name="idValue" value="<?php echo $pid ?>">
</div>
</form>
<div style="top: 60px" class="save">
<i class="fas fa-star icon-large"></i>
</div>
</div>
</article>
<?php } ?>
</section>
</div>
<?php } else { ?>
<h2 class="cart-empty">No Items found!</h2>
<?php }

if (isset($_POST["deleteButton"])) {
$pid = $_POST['idValue'];

```

```

$deleteQuery = "DELETE FROM `cart` WHERE `id` = $pid"; if ($conn->query($deleteQuery) ===
TRUE) {
echo("<script>location.href = 'Cart.php';</script>");
} else {
echo "Error: " . $conn->error;
}
}
if (isset($_POST["minusButton"]) && $_POST['quan-Value']>1) {
$pid = $_POST['id-Value'];
$qty = $_POST['quan-Value'];
$qty = $qty - 1;
$minusQuery = "UPDATE `cart` SET `quantity` = $qty WHERE `cart`.`id` = $pid";
$result = $conn->query($minusQuery); if ($result) {
echo("<script>location.href = 'Cart.php';</script>");
} else {
echo "Error: " . $conn->error;
}
}
if (isset($_POST["plusButton"]) && $_POST['quan-value'] < $_POST['pquan-value']) {
$pid = $_POST['id-value'];
$qty = $_POST['quan-value'];
$qty = $qty + 1;
$plusQuery = "UPDATE `cart` SET `quantity` = $qty WHERE `cart`.`id` = $pid";
$result = $conn->query($plusQuery); if ($result) {
echo("<script>location.href = 'Cart.php';</script>");
} else {
echo "Error: " . $conn->error;
}
}
?>

<div id="site-footer">
<div class="container clearfix">
<div style="float: left;">
<h2 class="subtotal">Subtotal: Rs<span id="subtt"> <?php echo $subtotal
?></span></h2>
<h3 class="tax">Taxes (5%): Rs<span id="tax"> <?php echo ($subtotal * 0.05)
?></span></h3>
<h3 class="shipping">Shipping: Rs<span id="ship"> 100</span></h3>
</div>

<div style="float: right;">
<h1 class="total">Total: Rs<span id="tot"> <?php echo ($subtotal + $subtotal * 0.05)
. " (Shipping Extra)" ?></span></h1>
<?php if ($subtotal) { ?>
<a class="btn" href="Payment_Gateway.php">Checkout</a>
<?php } else { ?>
<a class="btn" href="">Checkout</a>
<?php } ?>
</div>
</div>
</div>

```

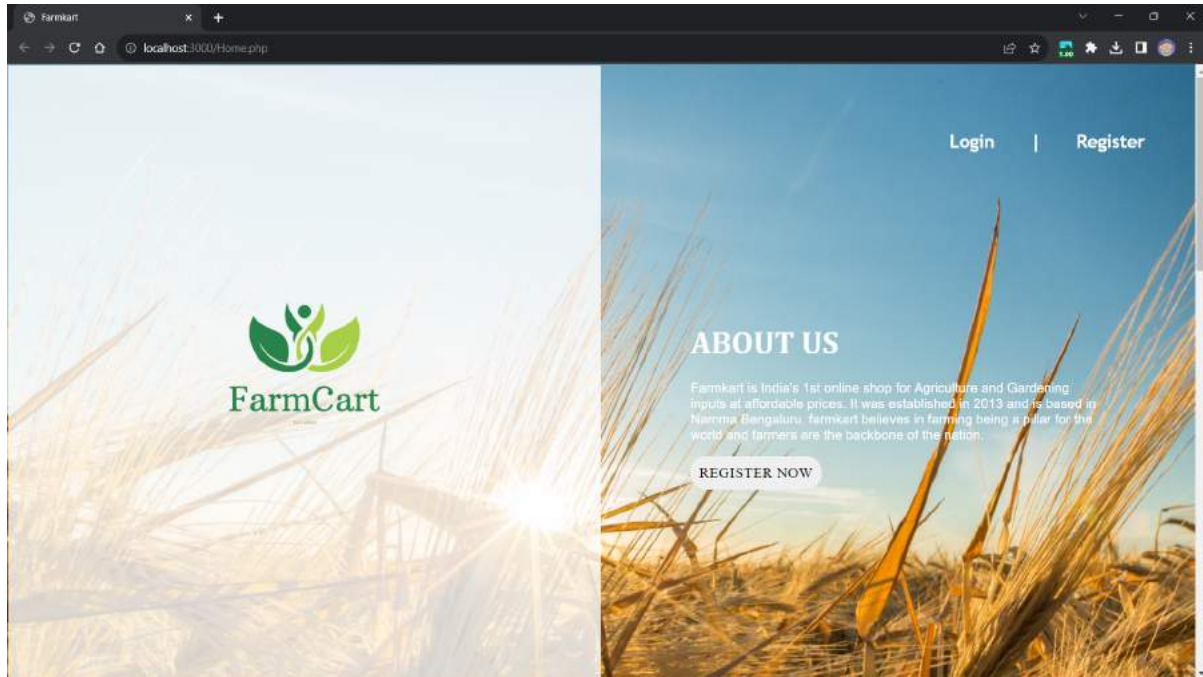


```
</div>  
</div>  
  
<?php require_once('footer.php'); ?>
```

[CODE LINK IN GITHUB](#)

SCREEN SHOTS

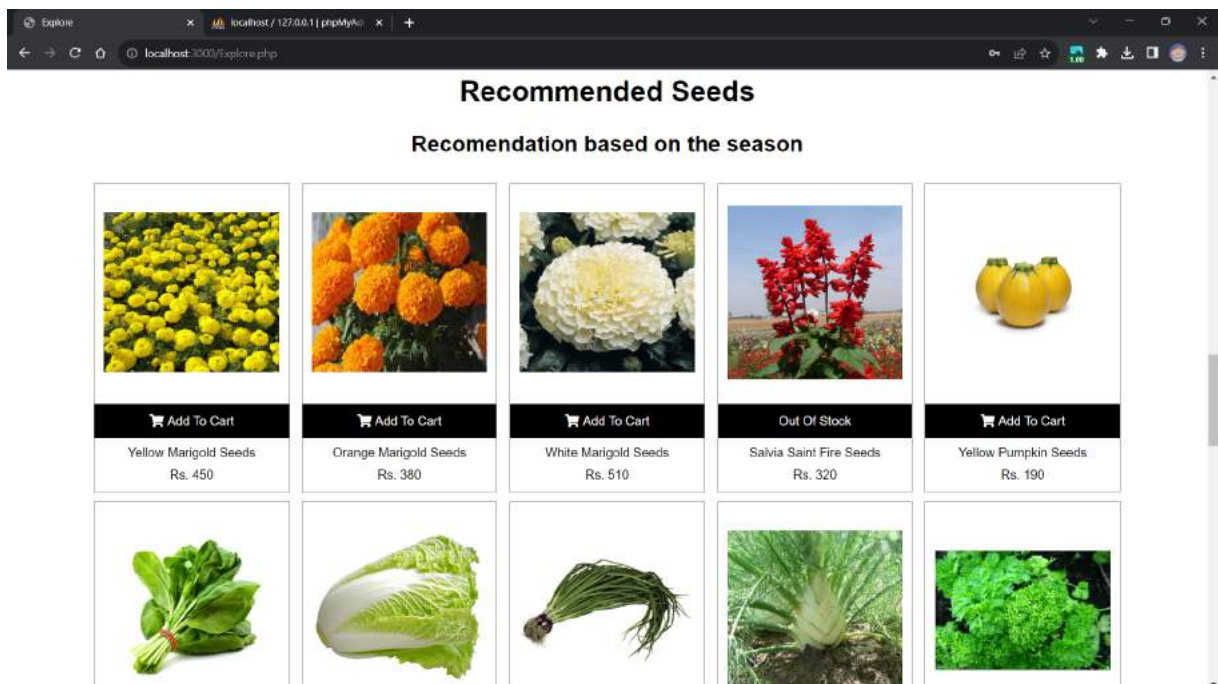
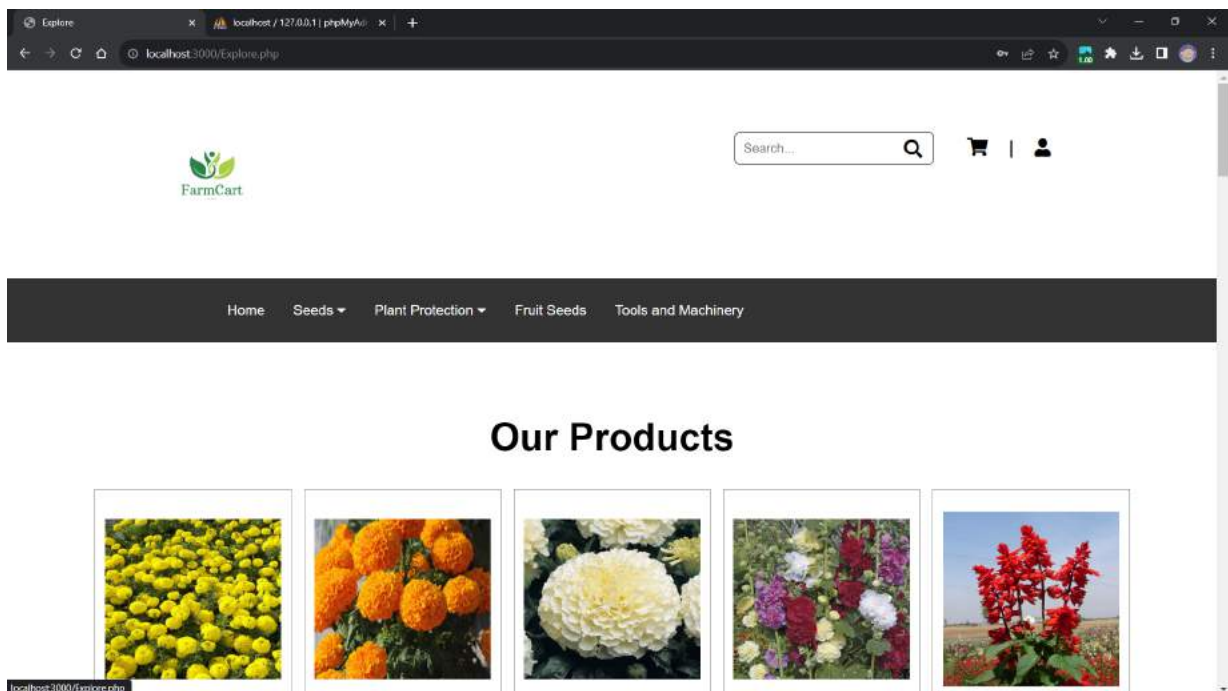
MAIN LANDING PAGE



USER REGISTRATION

A screenshot of a web browser displaying the FarmCart user registration page. The browser's address bar shows 'localhost:3000/Register.php'. The page has a teal background. At the top left is the FarmCart logo, and at the top right are links for 'Home' and 'Login'. The heading 'Farmkart' is centered, followed by the text 'Register to Buy Farming Essentials at Best Price.' Below this is a registration form titled 'Enter the following details:'. A note states '* All fields are required!'. The form includes a 'Personal Details' section with three input fields: 'First Name:' (with a placeholder 'e.g. Shivansh'), 'Last Name:' (with a placeholder 'e.g. Mishra'), and 'Date of Birth:' (with a placeholder 'dd-mm-yyyy' and a calendar icon). The 'Gender:' field is partially visible at the bottom.


HOME PAGE



SHIPPING CART

Shopping Cart

Remove all



Orange Marigold Seeds

Remove

Star

Placeholder text: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Soluta, numquam quis perspicatis ea ad omnis provident laborum dolore in atque.

-

1

+

Rs. 380

Rs. 380

Subtotal: Rs 380

Taxes (5%): Rs 19

Shipping: Rs 100

Total: Rs 399 (Shipping Extra)

Checkout

PAYMENT GATEWAY

Checkout

Billing Address

Full Name

Your Name

Email

Your Email

Address

Your Address

City

Your City

State

Your State


Pincode

Pincode

Shipping address same as billing

Payment

Accepted Cards



Credit card number

1111-2222-3333-4444

Exp Month

Exp Month

Exp Year

Exp Year

CVV

CVV Item

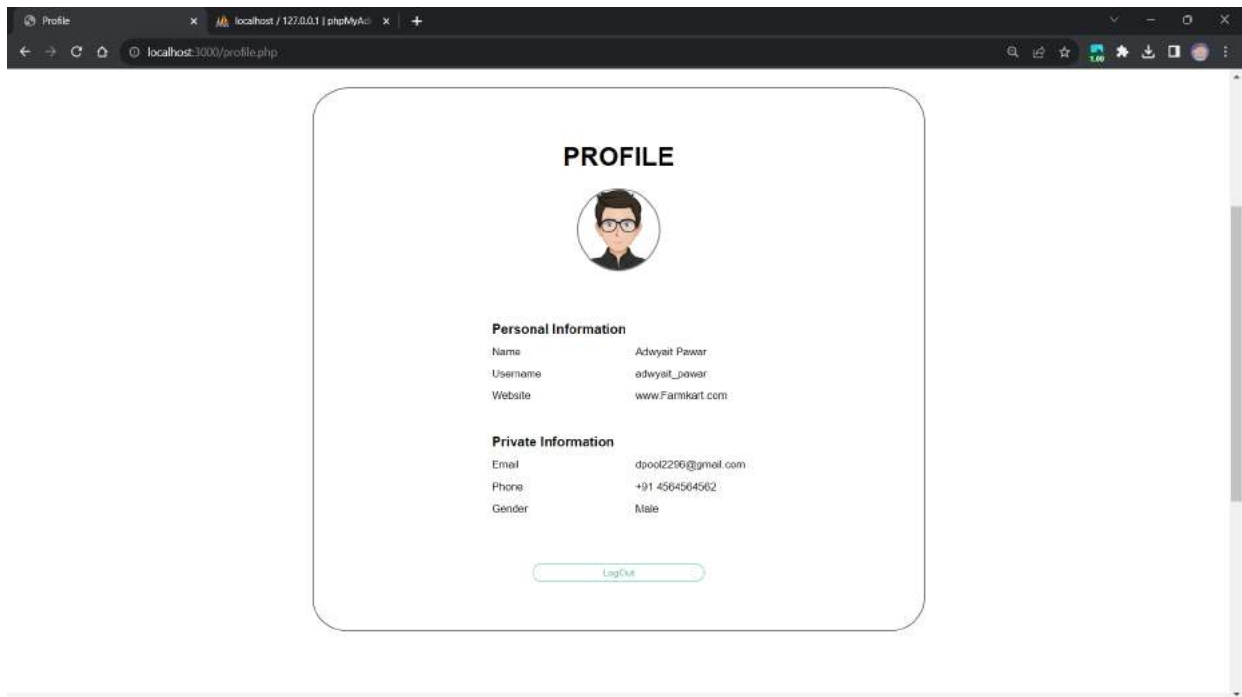
Captcha

Enter Captcha

603390

Continue to checkout

USER PROFILE



CONCLUSION

In conclusion, FARMIKART represents a comprehensive and user-centric solution for the agricultural community, offering a seamless online platform for purchasing farming essentials. The project incorporates a robust set of modules designed to enhance user experience, streamline operations, and optimize the supply chain. From user authentication to order fulfillment and tracking, each module plays a crucial role in the overall functionality of the platform.

The User Authentication and Management module ensures secure access, while the Product Catalog Management and Shopping Cart modules provide a user-friendly interface for browsing and purchasing farming essentials

The integration of a Recommendation Engine and User Reviews and Ratings modules contributes to a dynamic and informed shopping experience. The Admin Dashboard and Reporting and Analytics modules empower administrators with tools for efficient management, decision-making, and strategic planning.

With a mobile app interface possible in future integration, FARMKART extends its accessibility, catering to users on various devices. The Notification and Communication module keeps users informed about promotions, order status, and relevant updates, fostering customer engagement.

The platform's success is further supported by the Supplier Management module, ensuring a reliable and up-to-date supply chain. The Inventory Tracking and Management module prevents product unavailability by monitoring stock levels and facilitating timely restocking.

Incorporating a comprehensive Tracking Module, FARMKART not only ensures order transparency but also optimizes delivery routes, contributing to cost-effectiveness and customer satisfaction.

In essence, FARMKART emerges as a holistic and efficient solution, bringing together cutting-edge technology, a user-friendly interface, and data-driven insights to create a thriving online marketplace for farming essentials. The project aligns with the evolving needs of the agricultural sector, providing a platform that not only simplifies the buying process but also contributes to the overall growth and sustainability of the farming community.