



**DEPARTMENT OF COMPUTER SCIENCE
SCHOOL OF ENGINEERING AND TECHNOLOGY**

PONDICHERRY UNIVERSITY

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CSSC513: COMPUTER NETWORKS & WEB TECHNOLOGY LAB

Project Report: Online Grocery Store

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1. INTRODUCTION

In today's tech world most consumers are looking online for information that will help them make smarter purchasing decisions. In fact, according to the e-commerce Foundation, 88% of consumers will research product information before they make a purchase online or in the store. This buying behaviour trend emphasizes the importance of a website for today's businesses.

Hence in any business website serves as that "home base" where they can send customers when they want to make a purchase or learn more about a particular product or service they offer.

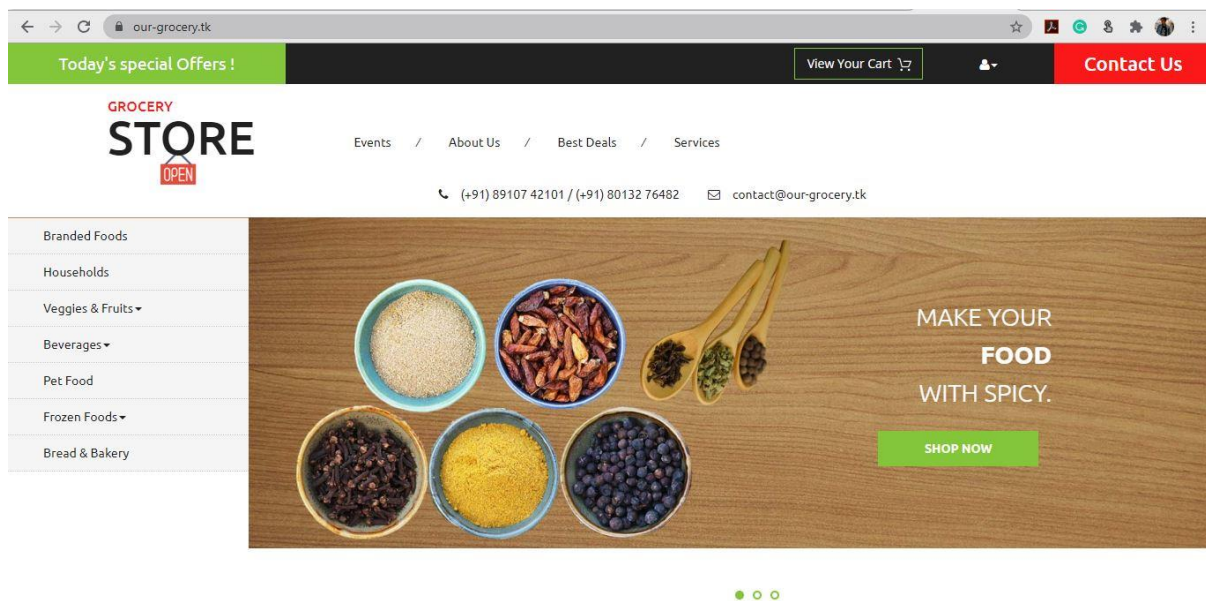


Fig (1): Home Page

For this project we have chosen the topic "Online grocery system". Now days, people often order their grocery products through online mode. Here in this website visitors can come and browse the products and their prices. If they are willing to purchase anything then they have to register first and only after login they can add the products in their cart.

2. WORKFLOW WITH DIAGRAM

In every dynamic and interactive website database in the backend is the one of the important components. At the initial stage the database is designed by creating the ER-Diagram. Basically, here database is created to store the data for each customer and the details of the products of the store. Here the relation between the online grocery store and customers is one to many just like the relation between online grocery store and the products. But at a time, each customer can have one address only hence the relationship is one to one here.

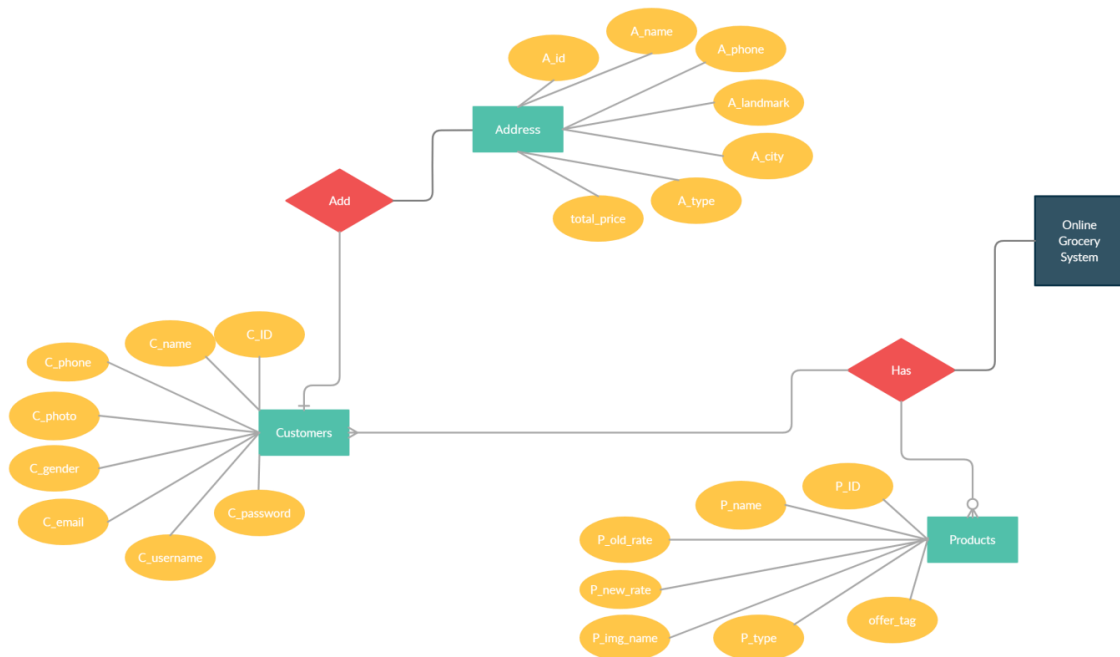


Fig (2): ER-Diagram of the online grocery store

Here, customers or visitors are the most important part of this kind of websites. The UI of the web application has been kept simple so that different types of users can use the website smoothly without any problems. Initially, the visitors or customers can browse in the website but if they want to purchase something then they have to login. If they have not registered yet then they have to register themselves by providing details like name, phone number, email address etc.

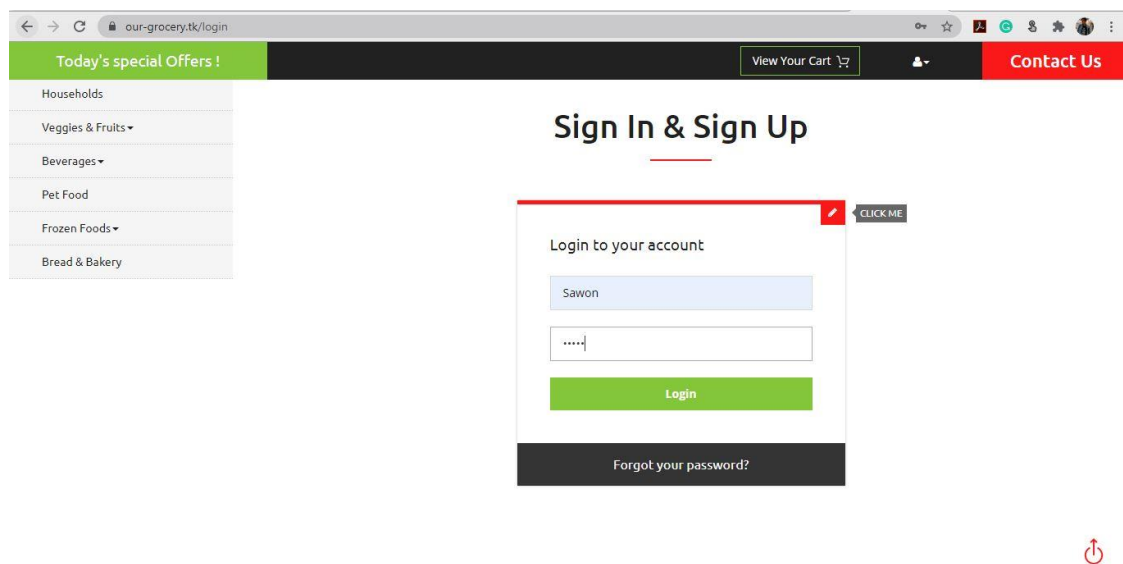


Fig (3): Login Screen

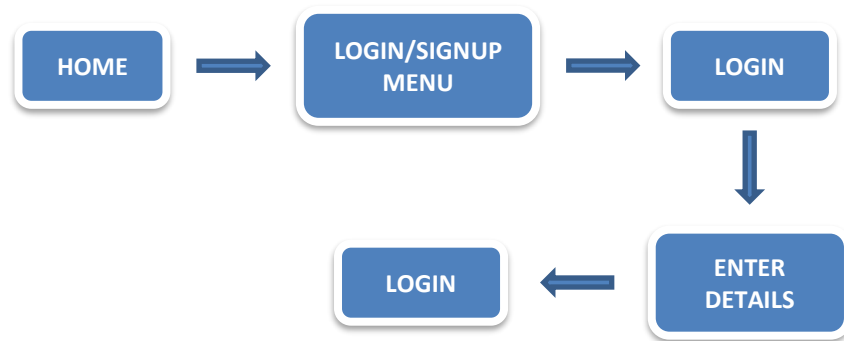


Fig (4): Login process flowchart

our-grocery.tk/register

Today's special Offers ! View Your Cart Contact Us

GROCERY STORE OPEN

Events / About Us / Best Deals / Services

(+91) 89107 42101 / (+91) 80132 76482 contact@our-grocery.tk

Home | Sign In & Sign Up

Branded Foods

Households

Veggies & Fruits

Beverages

Pet Food

Frozen Foods

Bread & Bakery

Sign In & Sign Up

Create an account

Name

Gender

CLICK ME

Fig (5a): Registration

our-grocery.tk/register

Today's special Offers ! View Your Cart Contact Us

Photo

Phone Number

Email Address

Username

Password

Retype Password

☐ I'm not a robot reCAPTCHA Privacy Terms

Register

Forgot your password?

Fig (5b): Registration

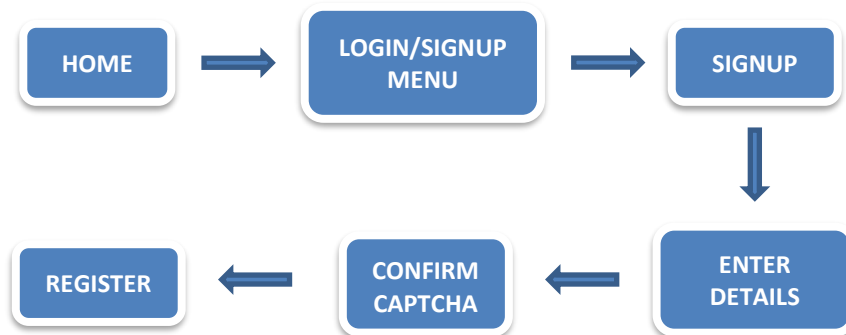


Fig (6): Registration process flowchart

After sign up and login customer can add products to their cart. Now we have added a little constraint that one customer should add more than two products to checkout. This is done to make wise and fair use of the online resources. During checkout they have to give the details of the address where the store will deliver the products they have ordered.

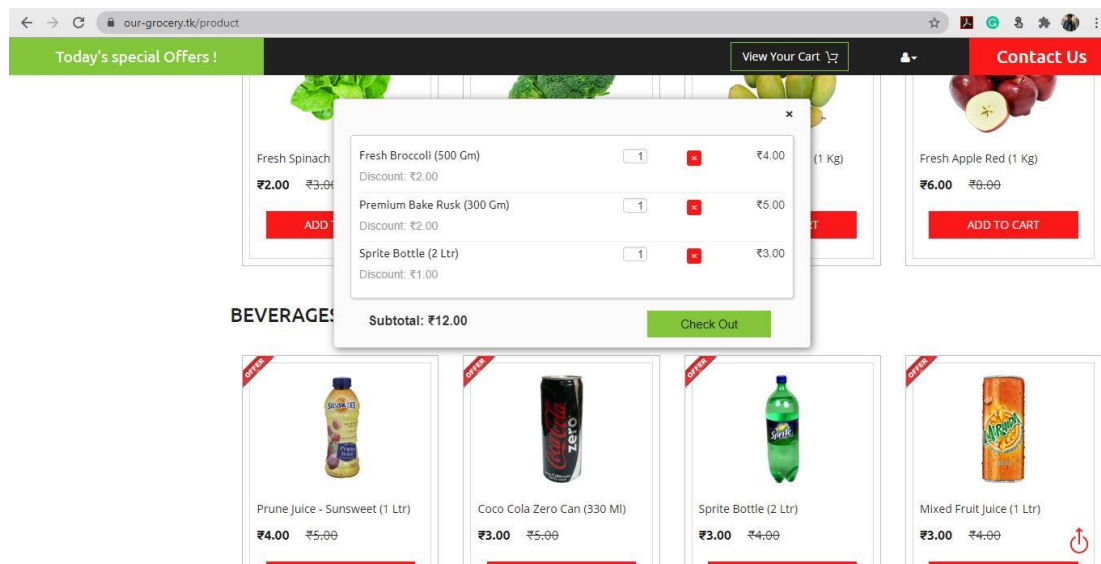


Fig (7a): Cart details

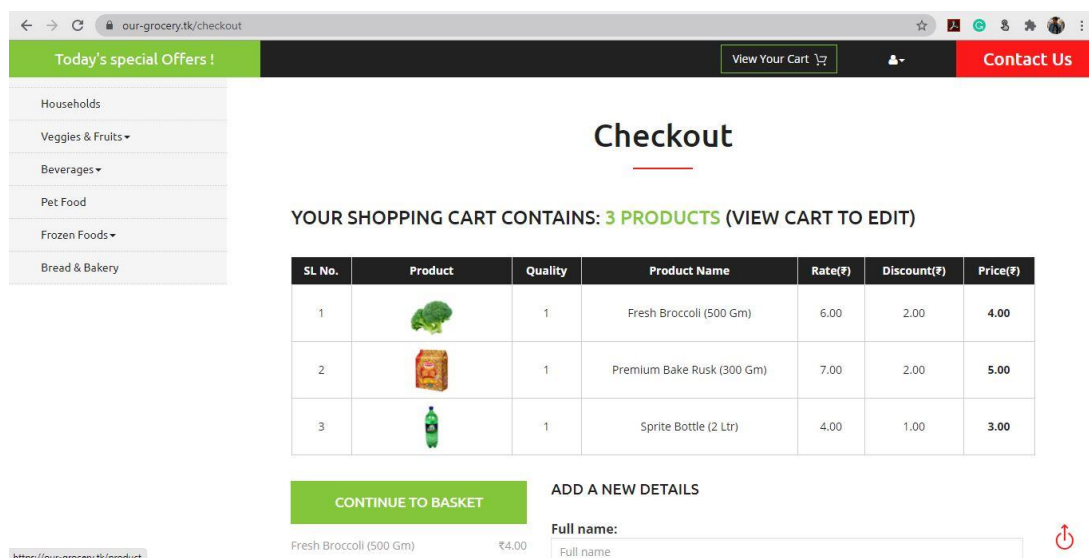


Fig (7b): Checkout billing details

our-grocery.tk/checkout

Today's special Offers ! View Your Cart Contact Us

CONTINUE TO BASKET

Fresh Broccoli (500 Gm)	₹4.00
Premium Bake Rusk (300 Gm)	₹5.00
Sprite Bottle (2 Ltr)	₹3.00
Total Service Charges	₹15.00
Totals	₹27.00

ADD A NEW DETAILS

Full name:
Robin Pandey

Mobile number:
8013245796

Landmark:
Jaunpur

Town/City:
Mirzapur

Address type:
Home

☒ I'm not a robot

DELIVERY TO THIS ADDRESS

Fig (8): Address details for checking out from the cart

our-grocery.tk/checkout

Today's special Offers ! View Your Cart Contact Us

Households
Veggies & Fruits
Beverages
Pet Food
Frozen Foods
Bread & Bakery

Checkout

YOUR SHOPPING CART CONTAINS: 3 PRODUCTS (VIEW CART TO EDIT)

SL No.	Product	Quality	Product Name	Rate(₹)	Discount(₹)	Price(₹)
1		1	Fresh Broccoli (500 Gm)	6.00	2.00	4.00
2		1	Premium Bake Rusk (300 Gm)	7.00	2.00	5.00
3		1	Sprite Bottle (2 Ltr)	4.00	1.00	3.00

CONTINUE TO BASKET

THANK YOU FOR SHOPPING WITH US! YOUR ORDER WILL BE DELIVERED IN 4 TO 5 DAYS....

Fresh Broccoli (500 Gm)	₹4.00
Premium Bake Rusk (300 Gm)	₹5.00

Fig (9): Checkout final message

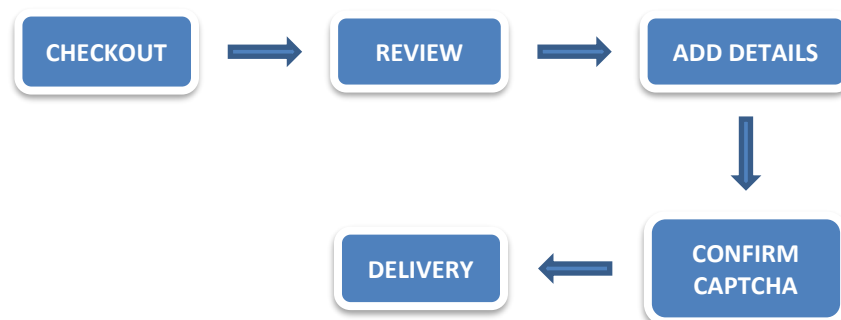


Fig (10): Checkout and Billing process flowchart

3. WEBSITE AND HOSTING DETAILS

DOMAIN URL: <https://our-grocery.tk> or <https://www.our-grocery.tk>

Connection secured using Cloudflare SSL and DNS service (http request will be automatically redirected to https)

HOSTING: 000webhost.com

DATABASE: default hosting database (phpmyadmin)

EMAIL SERVICE: SendGrid's SMTP service

EMAIL FORWARDING: Forward Email © Niftylettuce, LLC

CAPTCHA: Google reCAPTCHA v2 Tickbox

4. CODE

signin.php (Backend Script for logging a user in the website)

```
<?php
require_once "db_controller.php";
$db_handle = new DBController();
if($_SERVER["REQUEST_METHOD"] == "POST"){
    if(!isset($_COOKIE["u_id"])) {
        if(!empty($_POST["Username"]) && !empty($_POST["Password"])) {
            $query = "SELECT c_password FROM customer WHERE c_email LIKE '".$_POST["Use
rname"].".' OR c_username LIKE '".$_POST["Username"].".' LIMIT 1;";
            $db_pass = $db_handle->fetch($query);
            if($db_pass) {
                if($db_pass[0]["c_password"] == md5($_POST["Password"])) {
                    $query = "SELECT c_id FROM customer WHERE c_email LIKE '".$_POST["U
sername"].".' OR c_username LIKE '".$_POST["Username"].".' LIMIT 1;";
                    $result = $db_handle->fetch($query);
                    setrawcookie("u_id", rawurlencode($result[0]['c_id']), time() + (86
400 * 30), "/");
                    echo "<div style='margin: 1em 1em 1em 1em; text-
align: center;'><h3>Login Success!</h3></div>";
                }
            }
            else {
                echo "<div style='margin: 1em 1em 1em 1em; text-
align: center;'><h3>Wrong Password!</h3></div>";
            }
        }
        else {
            echo "<div style='margin: 2em 1em 2em 1em; padding-bottom: 3em; text-
align: center;'><h3>User not available!</h3><h4 style='padding-
top: 1em;'>Taking you to registration page...</h4></div><script>setTimeout(function() {loca
tion.href = '/register';}, 1000);</script>";
        }
    }
}
else {
    echo "<div style='margin: 2em 1em 2em 1em; padding-bottom: 3em; text-
align: center;'><h3>Already logged in!</h3></div><script>setTimeout(function() {location.re
load();}, 1500);</script>";
}
}
?>
```

signup.php (Backend Script for registering & logging a user in the website)

```
<?php
require_once "db_controller.php";
$db_handle = new DBController();
if($_SERVER["REQUEST_METHOD"] == "POST"){
    $response = json_decode(file_get_contents("https://www.google.com/recaptcha/api/siteverify?secret=6LeZk-wZAAAAIVpEl00hrRrx7CGPVHURY8yEIt&response=".$_POST['g-recaptcha-response']."&remoteip=".$_SERVER['REMOTE_ADDR']), true);
    if($response['success']) {
        $name = trim($_POST['Name']);
        $gender = $_POST['Gender'];
        $phone = $_POST['Phone'];
        $email = trim($_POST['Email']);
        $username = trim($_POST['Username']);
        $password = md5(trim($_POST['Password']));
        $query = "SELECT * FROM customer WHERE c_username LIKE '".$_username."' OR c_email LIKE '".$_email."' LIMIT 1;";
        $result = $db_handle->fetch($query);
        if(!$result) {
            $query = "SELECT c_id FROM customer ORDER BY c_id DESC LIMIT 1;";
            $result = $db_handle->fetch($query);
            $i = "0";
            if($result) {
                $i = $result[0]['c_id'];
            }
            $imageFileType = strtolower(pathinfo(basename($_FILES['Photo']['name']), PATHINFO_EXTENSION));
            $target_file = "../uploads/image".$i.".".$imageFileType;
            $query = "INSERT INTO customer (c_name, c_gender, c_photo, c_phone, c_email, c_username, c_password) VALUES('".$_name."', '".$_gender."', '".$_target_file."', '".$_phone."', '".$_email."', '".$_username."', '".$_password.'");";
            $result = $db_handle->run($query);
            if($result) {
                if(move_uploaded_file($_FILES["Photo"]["tmp_name"], $target_file)) {
                    $query = "SELECT c_id FROM customer WHERE c_name LIKE '".$_name."' LIMIT 1;";
                    $result = $db_handle->fetch($query);
                    setrawcookie("u_id", rawurlencode($result[0]['c_id']), time() + (86400 * 30), "/");
                    echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Registration Success!</h3><br><h4 style='padding: 1em 1em 1em 1em;'>You are logged in!</h4></div>";
                }
            }
            else {
                echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Image could not be uploaded!</h3></div>";
            }
        }
        else {
            echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Email exists!</h3></div>";
        }
        else {
            echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Security check failed!</h3></div><br><script>setTimeout(function() {location.reload();}, 1500);</script>";
        }
    }
}
?>
```


savedetails.php (Backend Script for checking out the customer)

```
<?php
    session_start();
    require_once "db_controller.php";
    $db_handle = new DBController();
    if($_SERVER["REQUEST_METHOD"] == "POST"){
        $response = json_decode(file_get_contents("https://www.google.com/recaptcha/api/siteverify?secret=6LeZk-wZAAAAAIvPEl00hrRrx7CGPVHURY8yEIt&response=".$_POST['g-recaptcha-response']."&remoteip=".$_SERVER['REMOTE_ADDR']), true);
        if($response['success']) {
            if(!isset($_COOKIE['u_id'])) {
                setrawcookie("pay", "1", time() + 86400, "/");
                echo "<h4 style='text-align: center;'>You're not logged in!</h4><br><h5 style='text-align: center;'>Redirecting you to login page...</h5><script>setTimeout(function() {location.href = '/login';}, 2500);</script>";
            }
            else{
                $name = $_POST['Name'];
                $phone = $_POST['Phone'];
                $landmark = $_POST['Landmark'];
                $city = $_POST['City'];
                $type = $_POST['Address_type'];
                $total_price = $_POST['Amount'];

                $query = "INSERT INTO address_details (a_name, a_phone, a_landmark, a_city, a_type, total_price) VALUES('".$name."', '".$phone."', '".$landmark."', '".$city."', '".$type."', '".$total_price."')";
                $result = $db_handle->run($query);
                if($result) {
                    echo "<h4 style='text-align: center;'>Thank you for shopping with us! Your order will be delivered in 4 to 5 days ....</h4><script>setTimeout(function() {location.href = '/home';}, 5000); paypal.minicart.reset();</script>";
                }
                else{
                    echo "<h4 style='text-align: center;'>Data failed to be inserted!</h4><script>setTimeout(function() {location.reload();}, 1500);</script>";
                }
            }
        }
        else {
            echo "<h4 style='text-align: center;'>Security check failed!</h4><br><script>setTimeout(function() {location.reload();}, 1500);</script>";
        }
    }
?>
```

Partial front end code to render product and product details

```
<h3>Energy Drinks</h3>
    <div class="w3ls_w3l_banner_nav_right_grid1">
        <?php
            $_SESSION['TYPE'] = 'energydrinks';
            $_SESSION['LIMIT'] = '4';
            $_SESSION['OFFSET'] = '0';
            include('php/fetch-prod.php');
        ?>
    <div class="clearfix"> </div>
</div>
```

fetch-prod.php (Backend Script for fetching product details from database)

```

<?php
    require_once "php/db_controller.php";

    $db_handle = new DBController();

    $query = "SELECT * FROM product_details WHERE p_type LIKE '$_SESSION['TYPE']' LIMIT
    $_SESSION['LIMIT'] OFFSET $_SESSION['OFFSET'].";";

    $result = $db_handle->fetch($query);

    $_SESSION['TYPE'] = '';
    $_SESSION['LIMIT'] = '0';
    $_SESSION['OFFSET'] = '0';

    if($result) {
        for($i=0; $i<count($result); $i++) {
            $p_name = strval($result[$i]["p_name"]);
            $p_amt = strval($result[$i]["p_new_rate"]);
            $p_o_amt = strval($result[$i]["p_old_rate"]);
            $p_img = strval($result[$i]["p_img_name"]);
            $of_tg = intval($result[$i]["offer_tag"]);
            $of_tg_img = "";
            $d_amt = number_format(doubleval($p_o_amt) - doubleval($p_amt), 2, '.', '');

            if($of_tg == 0) {
                $of_tg_img = "<div class=\"agile_top_brand_left_grid_pos\"><img src=\"image
s/offer.png\" alt=\" \" class=\"img-responsive\" /></div>";
            }
            else {
                $of_tg_img = "<div class=\"tag\"><img src=\"images/tag.png\" alt=\" \" clas
s=\"img-responsive\" /></div>";
            }

            echo "<div class=\"col-md-3 w3ls_w3l_banner_left\">
                <div class=\"hover14 column\">
                    <div class=\"agile_top_brand_left_grid w3l_agile_top_brand_left_grid\">
                        $.of_tg_img."
                    <div class=\"agile_top_brand_left_grid1\">
                        <figure>
                            <div class=\"snipcart-item block\">
                                <div class=\"snipcart-thumb\">
                                    <a href=\"/single\"><img src=\"\".$p_img.\" alt=\"
\" class=\"img-responsive\" /></a>
                                    <p>$.p_name.</p>
                                    <h4>$.p_amt." <span>$.p_o_amt."</span></h4>
                                </div>
                                <div class=\"snipcart-details\">
                                    <form id=\"cart-1\" action=\"#\" method=\"post\">
                                        <fieldset>
                                            <input type=\"hidden\" name=\"cmd\" value=
\"_cart\" />
                                            <input type=\"hidden\" name=\"add\" value=
\"1\" />
                                            <input type=\"hidden\" name=\"business\" va
lue=\" \" />
                                            <input type=\"hidden\" name=\"item_name\" v
alue=\"\".$p_name.\" />
                                            <input type=\"hidden\" name=\"amount\" valu
e=\"\".$p_o_amt.\" />
                                            <input type=\"hidden\" name=\"discount_amou
nt\" value=\"\".$d_amt.\" />

```

```

        <input type="hidden" name="currency_code" value="INR" />
        <input type="hidden" name="return" value=" " />
        <input type="hidden" name="cancel_return" value=" " />
        <input type="submit" name="submit" value="Add to cart" class="button" />
    </fieldset>
</form>
</div>
</div>
</figure>
</div>
</div>
</div>
</div>";
}
}
?>

```

Partial front end code to render a admin console to facilitate quick use of the database

```

<h3>ADMIN DB PANEL</h3>
<div class="w3_login_module" style="min-height: 300px;">
<div class="module form-module">
<div style="height: 5vh; "></div>
<div class="form">
<form id="db" enctype="multipart/form-data">
<input id="input" type="hidden" value="" name="data">
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(1)">CREATE CUSTOMER TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(2)">CREATE CART TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(3)">CREATE ADDRESS_DETAILS TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(4)">DROP CUSTOMER TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(5)">DROP CART TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(6)">DROP ADDRESS_DETAILS TABLE</button>
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="window.open('https://databases.000webhost.com/db_structure.php?server=1&db=id15407179_grocery', '_blank');">PHPMYADMIN DATABASE</button>
<input type="file" name="file" style="color: #fff; width: 40%; margin: 0.25em auto 0.25em auto;" accept=".csv">
<button type="button" style="color: #fff; width: 100%; margin: 0.25em;" onclick="submitForm(7)">UPDATE PRODUCTS</button>
<div id="msg"></div>
</form>
</div>
<script>
function submitForm(n) {
$('#input').attr('value', n)
$('#msg').html('');
var data = new FormData($('#form')[0]);
$.ajax({
type : 'POST',
url : 'php/db.php',
data : data,
processData: false,
contentType: false,
success : function(data){
$("#msg").html(data);

```

```

        $("#db")[0].reset();
    }
    });
}
</script>
</div>

```

Note: jQuery \$.ajax() facilitates quick use of the AJAX features with few lines of code compared to the traditional XMLHttpRequest() which required many lines to code to fire a GET or POST request.

reset.php (Backend Script for sending a password reset email and set token as cookie)

```

<?php
require_once "db_controller.php";

$db_handle = new DBController();

$headers = 'MIME-Version: 1.0' . "\r\n";
$headers .= "From: reset@our-grocery.tk\r\n";
$headers .= 'Content-type: text/html; charset=iso-8859-1' . "\r\n";

if($_SERVER["REQUEST_METHOD"] == "POST"){
    if(!isset($_COOKIE["u_id"])) {
        if(!empty($_POST["Username"])) {
            $query = "SELECT c_id, c_email FROM customer WHERE c_email LIKE '".$_POST["Username"]."' OR c_username LIKE '".$_POST["Username"]."' LIMIT 1;";
            $db_pass = $db_handle->fetch($query);
            if($db_pass) {
                $token = hash("sha256", rand());
                $message = "<!DOCTYPE html>
                <head>
                <meta charset='UTF-8'>
                <link href='https://stackpath.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css' rel='stylesheet' type='text/css'/>
                <title>Verify Email</title>
                </head>
                <body>
                <div style='text-align: center; width: 100%;'>
                <h3>Password Reset</h3>
                <h4>Please click the button below to reset your password. <br>Only valid for 10 minutes!</h4>
                <p><a href='https://our-grocery.tk/password?token=$token' style='border-radius: 5px; background-color: #007bff; color: #fff; padding: 10px; text-decoration: none; font-weight: bold; font-size: 13px;'>Reset Password</a></p>
                </div>
                </body>
                </html>";

                if(@mail($db_pass[0]['c_email'], 'Our Grocery Password Reset', $message, $headers)) {
                    setrawcookie("token", rawurlencode($token), time() + 600, "/");
                    setrawcookie("user", rawurlencode($db_pass[0]['c_id']), time() + 600, "/");
                    echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Reset Link sent to your email!</h3></div>";
                }
                else {
                    echo "<div style='margin: 1em 1em 1em 1em; text-align: center;'><h3>Email failed!</h3></div>";
                }
            }
        }
        else {

```

```

        echo "<div style='margin: 2em 1em 2em 1em; padding-bottom: 3em; text-align: center;'><h3>User not registered with us!</h3><h4 style='padding-top: 1em;'>Taking you to registration page...</h4></div><script>setTimeout(function() {location.href = '/register';}, 1000);</script>";
    }
}
}
else {
    echo "<div style='margin: 2em 1em 2em 1em; padding-bottom: 3em; text-align: center;'><h3>Already logged in!</h3></div><script>setTimeout(function() {location.href = '/login';}, 1500);</script>";
}
}
?>

```

5. MORE SCREENSHOTS

Fig (11): User Profile page

Fig (12): Mail and Contact page

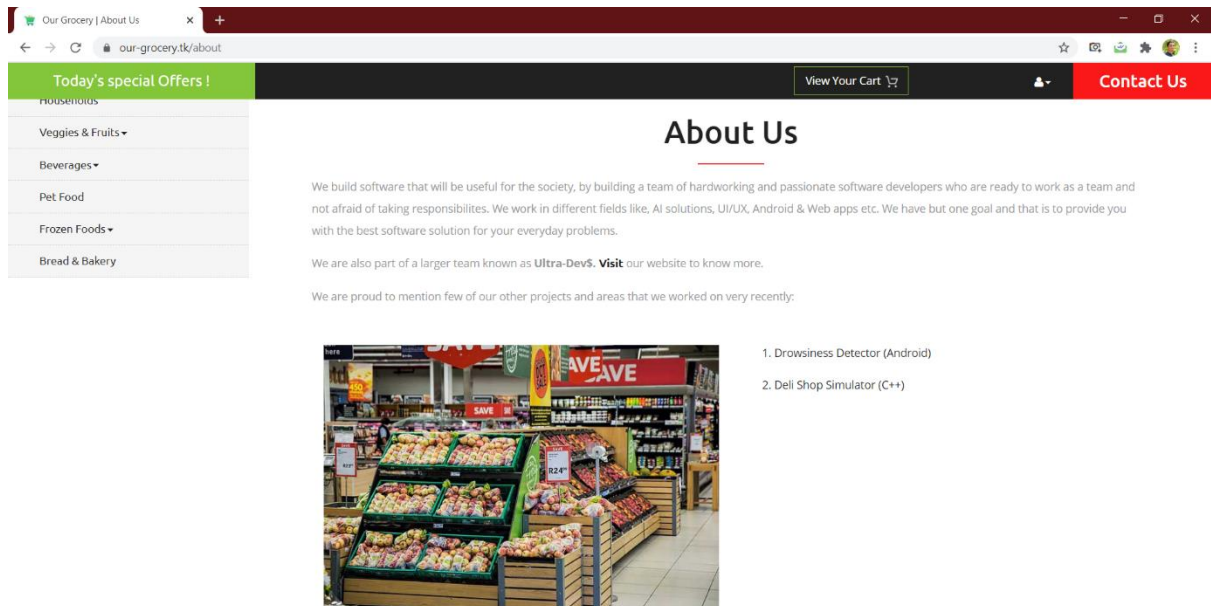


Fig (13a): About Us page

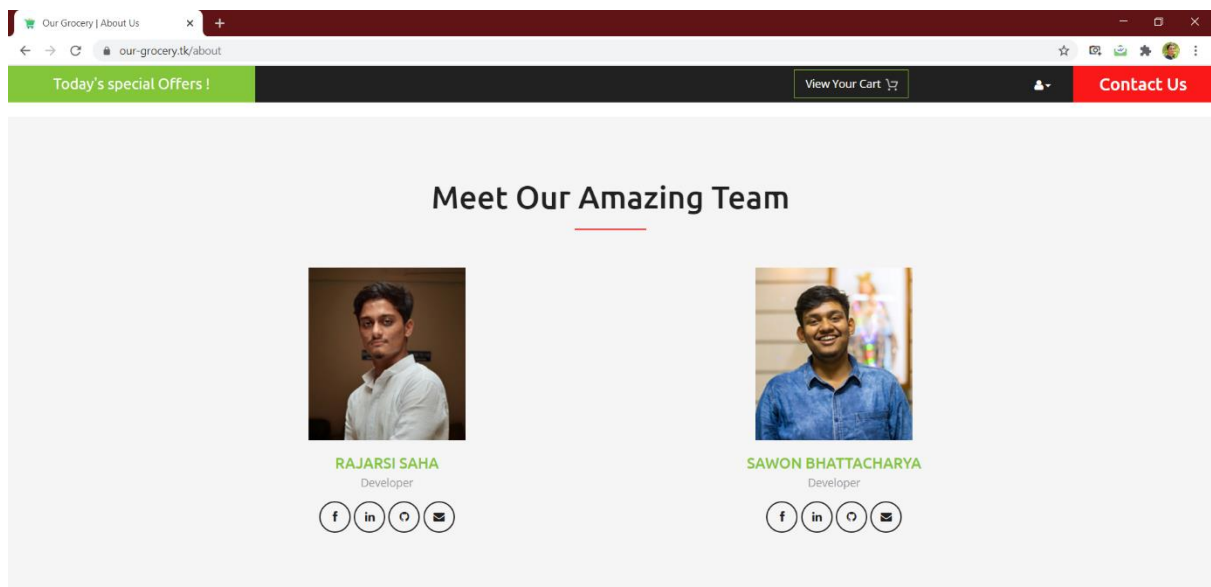


Fig (13b): About Us page

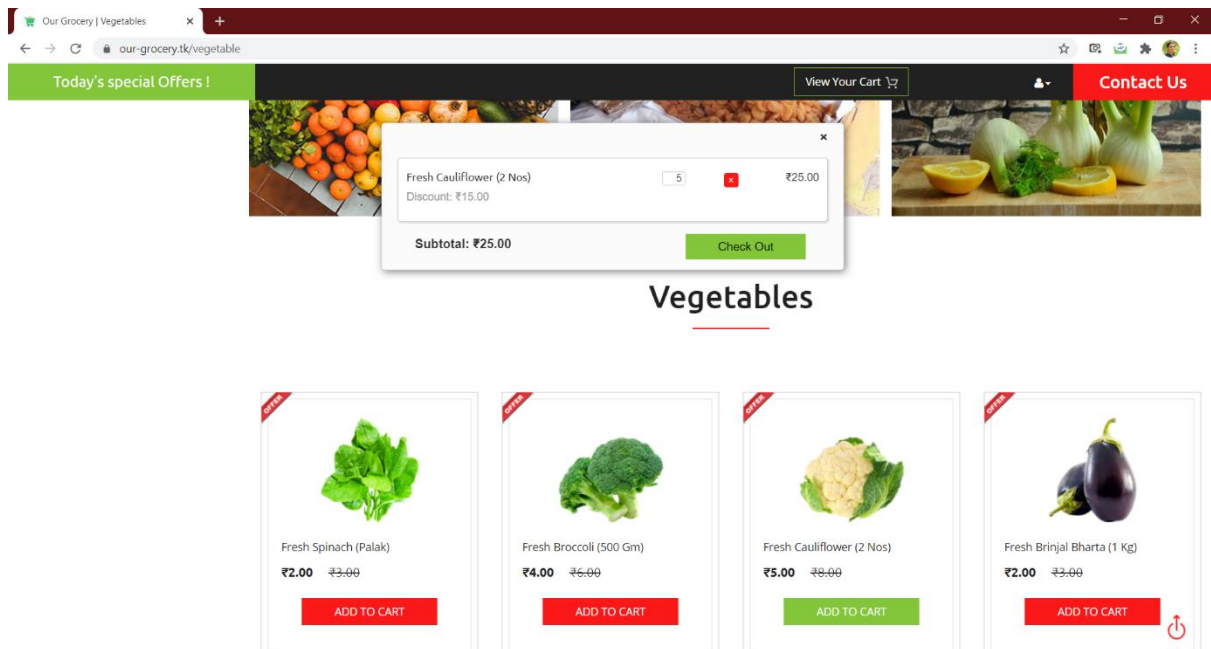


Fig (14): Buying Fresh Cauliflower (2 Nos) x 5 from Vegetables page

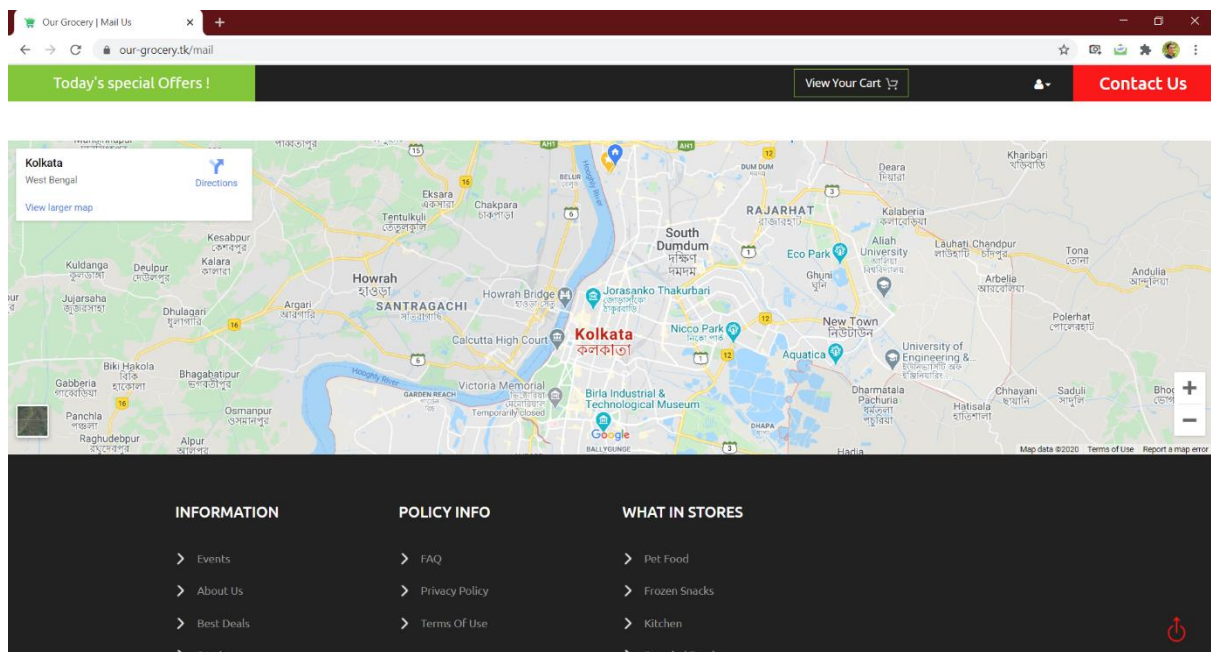


Fig (15): Browsing through the in-page Google Map in the Mail page

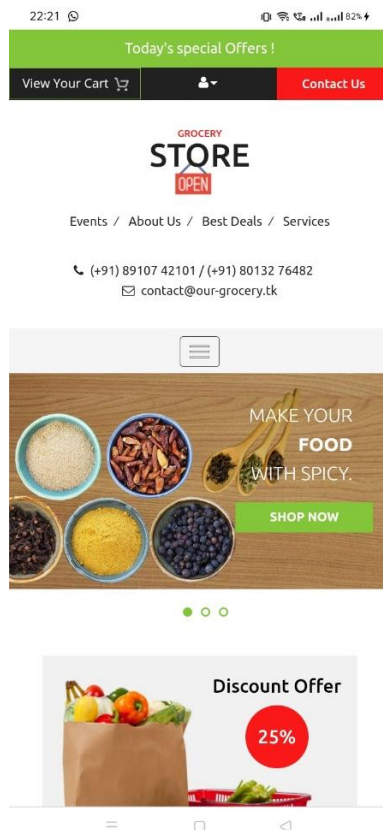


Fig (14): Mobile View of home page

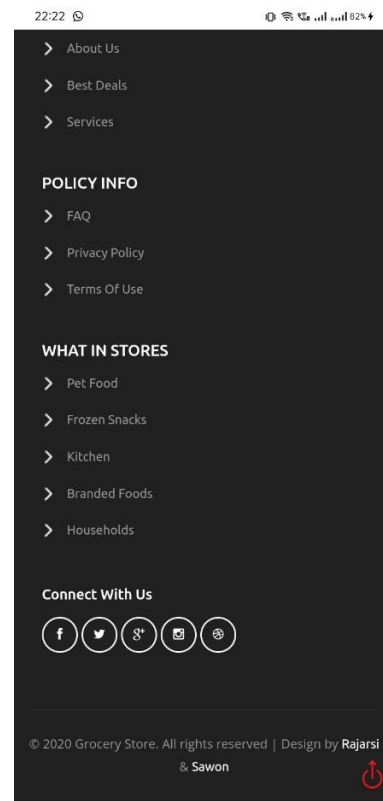


Fig (15): Mobile View of footer area of every page

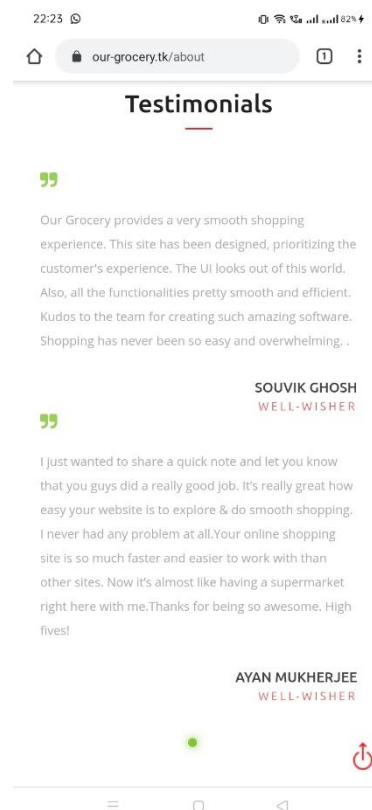


Fig (16): Mobile View of testimonials in about page