BUDGETING APPLICATION

A Mini Project Report

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Problem Statement:

Helps users create and track their budget against actual spending. (RDBMS: Budget Items, Expenses; Backend: Budget creation, expense tracking, variance calculation)

Github Link:

https://github.com/Gokula14/Budgeting-Application-

https://github.com/HARINI1404/Budget-application

Modules and Description:

1) **User Authentication:** Enables secure user registration and login to protect personal financial data**.**

2) **Budget Creation & Management:** Allows users to create budgets, allocate funds to categories, and edit/delete budgets**.**

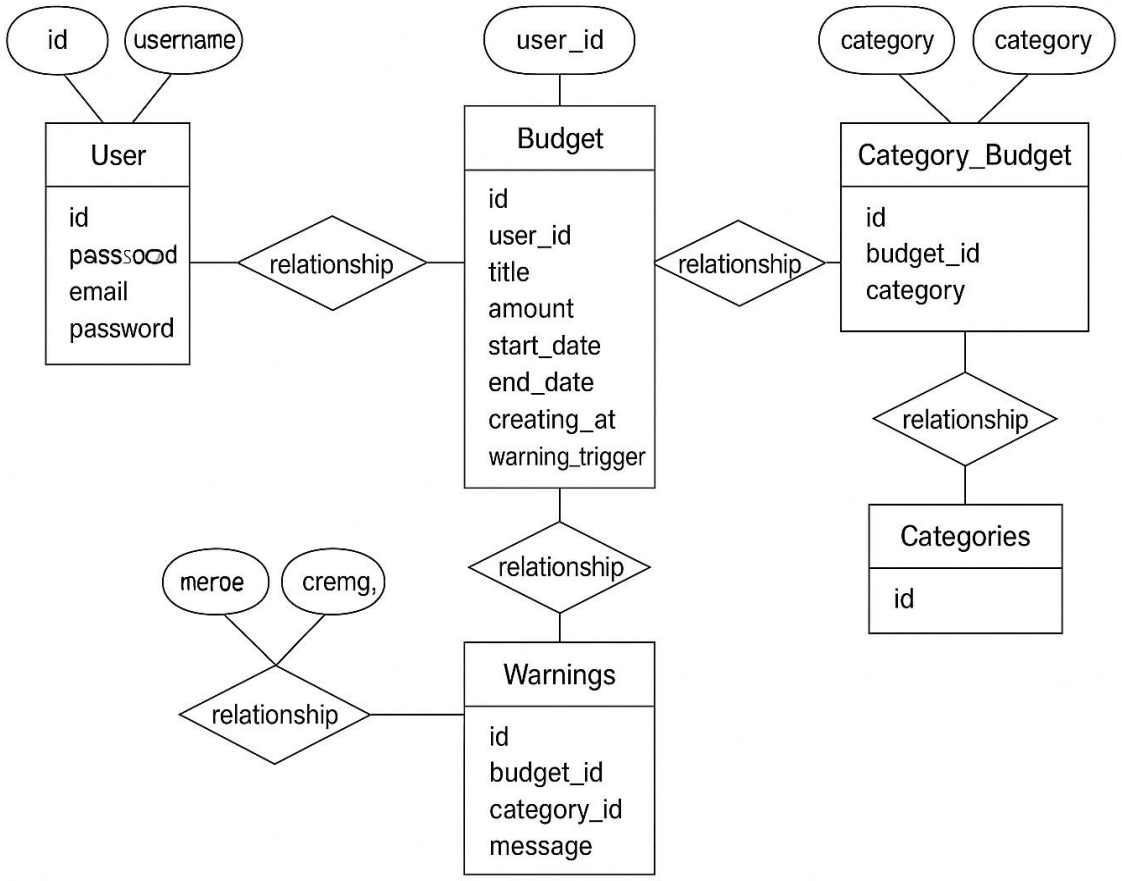
3) **Expense Tracking:** Records user expenses, categorizes them, and associates them with specific budgets for monitoring.

4) **Financial Overview:** Provides a dashboard summarizing budget status, expenses, and remaining balance for clear financial insights.

5) **Reporting and Alerts:** Generates reports on spending patterns and alerts users to potential overspending or budget warnings.

6) **Category-Based Analysis:** Allows users to view and analyze their budget and expenses organized by spending categories.

ER Diagram:



Programming Tools:

1. Frontend (User Interface)

- **Tools Used:** HTML, CSS, JavaScript, Bootstrap

- **Description :** These tools are used to create the structure, style, and interactivity of the web pages that users interact with in the budgeting application.

2. Backend (Server-side Logic)

Handles user requests, processes logic, and connects frontend to the database.:

- **Tools Used** : PHP
- **Description :** PHP handles the behind-the-scenes logic, such as processing form data, managing sessions, and connecting with the database to execute core application functions.

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3. Database (Data Storage)

- **Tools Used :** MySQL (via phpMyAdmin in XAMPP)
- **Description :** MySQL is used to store, retrieve, and manage structured data like user profiles, income records, and expense entries, ensuring data integrity and fast access**.**

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4. Visual Studio Code (VS Code)

VS Code provides a powerful development environment with syntax highlighting, debugging, extensions, and file management for building and editing project code efficiently.

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5. Terminal / Command Prompt

Used to run XAMPP commands, navigate the project directory, and perform basic file or server operations needed during development

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6. Google Chrome (or any modern browser)

Chrome is used to open and test the application in a web environment, with developer tools for inspecting elements, debugging scripts, and monitoring performance.

Database Design:

Column Name	Data Type	Constraints
id	INT(11)	PRIMARY KEY, NOT NULL, AUTO_INCREMENT
username	VARCHAR(50)	NOT NULL
email	VARCHAR(100)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
created_at	TIMESTAMP	NOT NULL, DEFAULT CURRENT_TIMESTAMP

Column Name	Data Type	Constraints
id	INT(11)	PRIMARY KEY, NOT NULL, AUTO_INCREMENT
user_id	INT(11)	NOT NULL, INDEX, FOREIGN KEY (user_id) references users(id) ON DELETE CASCADE
title	VARCHAR(100)	NOT NULL
amount	DECIMAL(10,2)	NOT NULL
start_date	DATE	NOT NULL
end_date	DATE	NOT NULL
created_at	TIMESTAMP	NOT NULL, DEFAULT CURRENT_TIMESTAMP
warning_triggered	TINYINT(1)	DEFAULT 0

Column Name	Data Type	Constraints
id	INT(11)	PRIMARY KEY, NOT NULL, AUTO_INCREMENT
budget_id	INT(11)	NOT NULL, INDEX, FOREIGN KEY (budget_id) references budgets(id) ON DELETE CASCADE
category	VARCHAR(100)	NOT NULL
amount	DECIMAL(10,2)	NOT NULL

Column Name	Data Type	Constraints
id	INT(11)	PRIMARY KEY, NOT NULL, AUTO_INCREMENT
budget_id	INT(11)	NOT NULL, INDEX, FOREIGN KEY (budget_id) references budgets(id) ON DELETE CASCADE
category_id	INT(11)	DEFAULT NULL, FOREIGN KEY (category_id) references category_budget(id) ON DELETE SET NULL
message	VARCHAR(255)	DEFAULT NULL
created_at	TIMESTAMP	NOT NULL, DEFAULT CURRENT_TIMESTAMP

Column Name	Data Type	Constraints
id	INT(11)	PRIMARY KEY, NOT NULL, AUTO_INCREMENT
budget_id	INT(11)	NOT NULL, INDEX, FOREIGN KEY (budget_id) references budgets(id) ON DELETE CASCADE
category_id	INT(11)	DEFAULT NULL, FOREIGN KEY (category_id) references category_budget(id) ON DELETE SET NULL
message	VARCHAR(255)	DEFAULT NULL
created_at	TIMESTAMP	NOT NULL, DEFAULT CURRENT_TIMESTAMP

SQL Query:

- Budget table:

```
CREATE TABLE budgets (
  id INT(11) NOT NULL AUTO_INCREMENT,
  user_id INT(11) NOT NULL,
  title VARCHAR(100) CHARACTER SET utf8mb4 COLLATE utf8mb4_general_ci NOT NULL,
  amount DECIMAL(10,2) NOT NULL,
  start_date DATE NOT NULL,
  end_date DATE NOT NULL,
  created_at TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
  warning_triggered TINYINT(1) DEFAULT 0,
  PRIMARY KEY (id),
  INDEX (user_id));
```

- Categories table:

```
CREATE TABLE category_budget (
  id INT(11) NOT NULL AUTO_INCREMENT,
  budget_id INT(11) NOT NULL,
  category VARCHAR(100) CHARACTER SET utf8mb4 COLLATE utf8mb4_general_ci NOT NULL,
  amount DECIMAL(10,2) NOT NULL,
  PRIMARY KEY (id),
  INDEX (budget_id),
  FOREIGN KEY (budget_id) REFERENCES budgets(id) ON DELETE CASCADE
);
```

- Expences Table:

```
CREATE TABLE expenses (
id INT(11) NOT NULL AUTO_INCREMENT,
budget_id INT(11) NOT NULL,
category_id INT(11) NOT NULL,
amount DECIMAL(10,2) NOT NULL,
date TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
warning_message VARCHAR(255) CHARACTER SET utf8mb4 COLLATE utf8mb4_general_ci,
PRIMARY KEY (id),
INDEX (budget_id),
INDEX (category_id),
FOREIGN KEY (budget_id) REFERENCES budgets(id) ON DELETE CASCADE,
FOREIGN KEY (category_id) REFERENCES category_budget(id) ON DELETE CASCADE
);
```

- Users table:

```
CREATE TABLE users (
id INT(11) NOT NULL AUTO_INCREMENT,
username VARCHAR(50) NOT NULL,
email VARCHAR(100) NOT NULL,
password VARCHAR(255) NOT NULL,
created_at TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
PRIMARY KEY (id),
INDEX (email)
);
```

- Warnings:

```
CREATE TABLE warnings (
  id INT(11) NOT NULL AUTO_INCREMENT,
  budget_id INT(11) NOT NULL,
  category_id INT(11) DEFAULT NULL,
  message VARCHAR(255) COLLATE utf8mb4_general_ci DEFAULT NULL,
  created_at TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
  PRIMARY KEY (id),
  INDEX (budget_id),
  FOREIGN KEY (budget_id) REFERENCES budgets(id) ON DELETE CASCADE,
  FOREIGN KEY (category_id) REFERENCES categories(id) ON DELETE SET NULL
);
```

Coding:

Login.php:

```
login.php <?php
 session_start();
 if ($_SERVER['REQUEST_METHOD'] === 'POST') {
    $host = "localhost";
    $user = "root";
    $pass = "";
    $db = "budget_app";
    $conn = new mysqli($host, $user, $pass, $db);
    if ($conn->connect_error) {
       die(" ✕ Connection failed: " . $conn->connect_error);
    }

    $email = mysqli_real_escape_string($conn, $_POST['email']);
    $password = $_POST['password'];

    $sql = "SELECT id, username, password FROM users WHERE email = ?";
    $stmt = $conn->prepare($sql);
    $stmt->bind_param("s", $email);
    $stmt->execute();
    $result = $stmt->get_result();

    if ($result && $result->num_rows === 1) {
       $user = $result->fetch_assoc();
       if (password_verify($password, $user['password'])) {
          $_SESSION['user_id'] = $user['id'];
          $_SESSION['username'] = $user['username'];
          header("Location: dashboard.php");
          exit();
       } else {
          $error = " ✕ Invalid password!";
       }
    } else {
       $error = " ✕ No account found with that email!";
    }
```

```
  $stmt->close();
    $conn->close();
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Login - Budget App</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <style>
        body {
            background: linear-gradient(135deg, #5374d8, #d6b0fa);
            min-height: 100vh;
            display: flex;
            align-items: center;
            justify-content: center;
        }
        .login-card {
            background-color: #ffffff;
            padding: 2.5rem;
            border-radius: 1rem;
            box-shadow: 0 10px 25px rgba(0, 0, 0, 0.1);
            width: 100%;
            max-width: 450px;
        }
        .login-card h2 {
            font-weight: bold;
            color: #333;
            margin-bottom: 1.5rem;
            text-align: center;
        }
        .form-control {
            border-radius: 0.75rem;
        }
        .btn-primary {
            border-radius: 0.75rem;
            font-weight: 500;
        }
    </style>
```

```
    </head>
    <body>
    <div class="login-card">
      <h2>Login</h2>
      <?php if (isset($error)): ?>
        <div class="alert alert-danger"><?php echo $error; ?></div>
      <?php endif; ?>
      <form method="POST" action="">
        <div class="mb-3">
          <label class="form-label">Email</label>
          <input type="email" name="email" class="form-control" placeholder="Enter your email" required>
        </div>
        <div class="mb-3">
          <label class="form-label">Password</label>
          <input type="password" name="password" class="form-control" placeholder="Enter your password"
    required>
        </div>
        <button type="submit" class="btn btn-primary w-100">Login</button>
        <p class="mt-3 text-center text-muted">Don't have an account? <a href="register.php">Register</a></p>
      </form>
    </div>
    </body>
</html>
```

Register.php:

register.php <?php

```
if ($_SERVER['REQUEST_METHOD'] === 'POST') {
    $host = "localhost";
    $user = "root";
    $pass = "";
    $db = "budget_app";
    $conn = new mysqli($host, $user, $pass, $db);
    if ($conn->connect_error) {
      die(" ✕ Connection failed: " . $conn->connect_error);
    }
    $username = mysqli_real_escape_string($conn, $_POST['username']);
    $email = mysqli_real_escape_string($conn, $_POST['email']);
    $password = password_hash($_POST['password'], PASSWORD_DEFAULT);
    $checkEmail = $conn->prepare("SELECT id FROM users WHERE email = ?");
    $checkEmail->bind_param("s", $email);
    $checkEmail->execute();
    $checkEmail->store_result();
```

```
    if ($checkEmail->num_rows > 0) {
        $error = "⚠ Email already registered!";
    } else {
        $sql = "INSERT INTO users (username, email, password) VALUES (?, ?, ?)";
        $stmt = $conn->prepare($sql);
        if ($stmt === false) {
            $error = "✖ Error preparing statement: " . $conn->error;
        } else {
            $stmt->bind_param("sss", $username, $email, $password);
            if ($stmt->execute()) {
                header("Location: login.php");
                exit();
            } else {
                $error = "✖ Error: " . $stmt->error;
            }
            $stmt->close();
        }
    }
    $checkEmail->close();
    $conn->close();
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Register - Budget App</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <style>
        body {
            background: linear-gradient(135deg, #5374d8, #d6b0fa);
            min-height: 100vh;
            display: flex;
            align-items: center;
            justify-content: center;
        }
        .register-card {
            background-color: #dfe1ff;
            padding: 2.5rem;
            border-radius: 1rem;
            box-shadow: 0 10px 25px rgba(0, 0, 0, 0.1);
            width: 100%;
```

```
        max-width: 450px;
      }
      .register-card h2 {
        font-weight: bold;
        color: #333;
        margin-bottom: 1.5rem;
        text-align: center;
      }
      .form-control {
        border-radius: 0.75rem;
      }
      .btn-primary {
        border-radius: 0.75rem;
        font-weight: 500;
      }
  </style>
</head>
<body>
<div class="register-card">
  <h2>Create Account</h2>
  <?php if (isset($success)): ?>
    <div class="alert alert-success"><?php echo $success; ?></div>
  <?php elseif (isset($error)): ?>
    <div class="alert alert-danger"><?php echo $error; ?></div>
  <?php endif; ?>
  <form method="POST" action="">
    <div class="mb-3">
      <label class="form-label">Username</label>
      <input type="text" name="username" class="form-control" placeholder="Enter your username" required>
    </div>
    <div class="mb-3">
      <label class="form-label">Email</label>
      <input type="email" name="email" class="form-control" placeholder="Enter your email" required>
    </div>
    <div class="mb-3">
      <label class="form-label">Password</label>
      <input type="password" name="password" class="form-control" placeholder="Enter your password"
required>
    </div>
    <button type="submit" class="btn btn-primary w-100">Register</button>
    <p class="mt-3 text-center text-muted">Already have an account? <a href="login.php">Login</a></p>
```

```
    </form>
    </div>
    </body>
</html>
```

Category.php:

```
    <?php
    session_start();
    if (!isset($_SESSION['user_id'])) {
        header('Location: login.php');
        exit();
    }
    $username = $_SESSION['username'];
    $conn = new mysqli("localhost", "root", "", "budget_app");
    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }
    $budget_query = "SELECT id, title, amount FROM budgets WHERE user_id = ?";
    $stmt = $conn->prepare($budget_query);
    $stmt->bind_param("i", $_SESSION['user_id']);
    $stmt->execute();
    $budget_result = $stmt->get_result();
    if (isset($_GET['budget_id'])) {
        $budget_id = $_GET['budget_id'];
        $selected_budget_query = "SELECT id, title, amount FROM budgets WHERE id = ?";
        $stmt = $conn->prepare($selected_budget_query);
        $stmt->bind_param("i", $budget_id);
        $stmt->execute();
        $selected_budget_result = $stmt->get_result();
        if ($selected_budget_result->num_rows > 0) {
            $selected_budget = $selected_budget_result->fetch_assoc();
            $category_query = "SELECT cb.category, cb.amount AS allocated_amount, SUM(e.amount) AS spent_amount
                    FROM category_budget cb
                    LEFT JOIN expenses e ON cb.id = e.category_id
                    WHERE cb.budget_id = ?
                    GROUP BY cb.id";
            $stmt = $conn->prepare($category_query);
            $stmt->bind_param("i", $budget_id);
            $stmt->execute();
            $category_result = $stmt->get_result();
        } else {
```

```
echo "Selected budget not found.";
        exit();
    }
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <title>Categories - Budget App</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet" />
  <link href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.10.5/font/bootstrap-icons.css" rel="stylesheet" />
  <style>
    body, html {
      margin: 0;
      padding: 0;
      height: 100%;
      font-family: 'Segoe UI', sans-serif;
    }
    .navbar {
      background-color: #6c63ff;
    }
    .navbar-brand, .nav-link {
      color: #fff !important;
    }
    .dashboard {
      padding: 80px 20px 40px;
      min-height: 100vh;
      background: linear-gradient(135deg, #eceef1, #f6f9fc);
      overflow-y: auto;
    }
    .card-box {
      border-radius: 1rem;
      box-shadow: 0 10px 25px rgba(0, 0, 0, 0.05);
      padding: 20px;
      background: white;
      height: 100%;
    }
    .card-title {
      font-size: 0.95rem;
```

```
font-weight: 600;
  color: #6c63ff;
 }
 .card-value {
  font-size: 1.5rem;
  font-weight: bold;
  color: #333;
 }

 .action-buttons .btn {
  background-color: #6c63ff;
  color: white;
  margin: 10px;
  border-radius: 0.5rem;
  min-width: 180px;
 }
 .section-header {
  font-weight: bold;
  font-size: 1.3rem;
  margin-top: 50px;
  margin-bottom: 20px;
  color: #333;
 }
 .alert-warning {
  background-color: #f8d7da;
  color: #721c24;
 }
 .category-item {
  margin-top: 20px;
  padding: 10px;
  background-color: #fff;
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
  border-radius: 10px;
 }
 .category-item h5 {
  font-size: 1.2rem;
  font-weight: 600;
 }
 .category-item .amount {
  font-size: 1rem;
```

```
 color: #333;
   }
   .back-btn {
    background-color: #6c63ff;
    color: white;
    margin-left: 20px;
    border-radius: 0.5rem;
   }
 </style>
</head>
<body>

 <!-- Top Navbar -->
 <nav class="navbar navbar-expand-lg fixed-top">
  <div class="container-fluid justify-content-between">
   <a class="navbar-brand fw-bold text-center" href="#">BudgetApp</a>
   <a href="dashboard.php" class="btn back-btn">Back to Dashboard</a>
  </div>
 </nav>
 <!-- Scrollable Dashboard -->
 <div class="dashboard container-fluid">
  <div class="container">
   <h2 class="fw-bold">Welcome, <?php echo htmlspecialchars($username); ?>!</h2>
   <p class="text-muted">Manage your categories and budgets</p>
   <!-- Budget List -->
   <h4 class="section-header">Your Budgets</h4>
   <div class="row g-4">
    <?php while ($budget = $budget_result->fetch_assoc()): ?>
     <div class="col-md-4">
      <div class="card-box">
       <div class="card-title"><?php echo htmlspecialchars($budget['title']); ?></div>
       <div class="card-value">₹<?php echo number_format($budget['amount'], 2); ?></div>
       <a href="category.php?budget_id=<?php echo $budget['id']; ?>" class="btn btn-outline-primary mt-
3">View Categories</a>
      </div>
     </div>
    <?php endwhile; ?>
   </div>
   <?php if (isset($selected_budget)): ?>
    <!-- Categories for selected budget -->
    <h4 class="section-header">Categories in "<?php echo htmlspecialchars($selected_budget['title']); ?>"</h4>
```

```
        <div class="row g-4">
          <?php while ($category = $category_result->fetch_assoc()): ?>
            <div class="col-md-4">
              <div class="category-item">
                <h5><?php echo htmlspecialchars($category['category']); ?></h5>
                <div class="amount">
                  <p>Allocated: ₹<?php echo number_format($category['allocated_amount'], 2); ?></p>
                  <p>Spent: ₹<?php echo number_format($category['spent_amount'], 2); ?></p>
                </div>
              </div>
            </div>
          <?php endwhile; ?>
        </div>
      <?php else: ?>
        <div class="alert alert-warning" role="alert">
          No categories available for this budget.
        </div>
      <?php endif; ?>
    </div>
  </div>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Create_budget.php:

```
<?php
session_start();
if (!isset($_SESSION['user_id'])) {
    header('Location: login.php');
    exit();
}
if ($_SERVER["REQUEST_METHOD"] === "POST") {
    $title = $_POST['title'];
    $total_amount = floatval($_POST['total_amount']);
    $start_date = $_POST['start_date'];
    $end_date = $_POST['end_date'];
    $categories = [
        'Food',
        'Transportation',
        'Entertainment',
        'Utilities',
        'Savings'
    ];
```

```
    $category_amounts = [];
    $total_category_amount = 0;
   foreach ($categories as $category) {
        $amount = floatval($_POST[$category]);
        $category_amounts[$category] = $amount;
        $total_category_amount += $amount;
    }
    if ($total_category_amount > $total_amount) {
        $error = "❌ The total of category amounts exceeds the total budget!";
    } else {
        $conn = new mysqli("localhost", "root", "", "budget_app");
        if ($conn->connect_error) {
            die("❌ Connection failed: " . $conn->connect_error);
        }
        $stmt = $conn->prepare("INSERT INTO budgets (user_id, title, amount, start_date, end_date) VALUES (?, ?, ?,
?, ?)");
        $stmt->bind_param("isdss", $_SESSION['user_id'], $title, $total_amount, $start_date, $end_date);
        if ($stmt->execute()) {
            $budget_id = $stmt->insert_id;
            foreach ($category_amounts as $category => $amount) {
                $stmt = $conn->prepare("INSERT INTO category_budget (budget_id, category, amount) VALUES (?, ?,
?)");
                $stmt->bind_param("isd", $budget_id, $category, $amount);
                $stmt->execute();
            }
            header("Location: dashboard.php");
            exit();
        } else {
            $error = "❌ Failed to create budget: " . $stmt->error;
        }
        $conn->close();
    }
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Create Budget</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <script>
```

```
        function updateCategoryAmounts() {
            const totalAmount = parseFloat(document.getElementById('total_amount').value);
            let totalCategoryAmount = 0;
            const categoryInputs = document.querySelectorAll('.category-amount');
            categoryInputs.forEach(input => {
                totalCategoryAmount += parseFloat(input.value) || 0;
            });
            if (totalCategoryAmount > totalAmount) {
                document.getElementById('error-message').innerText = ' ✕ The total of category amounts exceeds the
total budget!';
            } else {
                document.getElementById('error-message').innerText = '';
            }
        }
    </script>
</head>
<body>
<div class="container mt-5">
    <h3>Create Budget</h3>
    <?php if (isset($error)): ?>
        <div class="alert alert-danger"><?= $error ?></div>
    <?php endif; ?>
    <form method="POST" oninput="updateCategoryAmounts()">
        <div class="mb-3">
            <label for="title" class="form-label">Budget Title</label>
            <input type="text" name="title" class="form-control" required>
        </div>
        <div class="mb-3">
            <label for="total_amount" class="form-label">Total Budget Amount</label>
            <input type="number" id="total_amount" name="total_amount" class="form-control" required>
        </div>
        <!-- Display categories dynamically (hardcoded here) -->
        <div class="mb-3">
            <label class="form-label">Categories</label>
            <div class="row">
                <?php
                $categories = ['Food', 'Transportation', 'Entertainment', 'Utilities', 'Savings'];
                foreach ($categories as $category): ?>
                    <div class="col-md-6">
                        <label for="<?= $category ?>" class="form-label"><?= $category ?></label>
                        <input type="number" name="<?= $category ?>" class="form-control category-amount" value="0"
required>
```

```
    </div>
                <?php endforeach; ?>
            </div>
        </div>
        <div id="error-message" class="text-danger mb-3"></div>
        <div class="mb-3">
            <label for="start_date" class="form-label">Start Date</label>
            <input type="date" name="start_date" class="form-control" required>
        </div>

        <div class="mb-3">
            <label for="end_date" class="form-label">End Date</label>
            <input type="date" name="end_date" class="form-control" required>
        </div>
        <button type="submit" class="btn btn-primary">Create Budget</button>
    </form>
</div>
</body>
</html>
```

Delete_budget.php:

```
<?php
session_start();
if (!isset($_SESSION['user_id'])) {
    header('Location: login.php');
    exit();
}
$conn = new mysqli("localhost", "root", "", "budget_app");
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
if (isset($_GET['delete_id'])) {
    $delete_id = $_GET['delete_id'];
    $get_categories_query = "SELECT id FROM category_budget WHERE budget_id = ?";
    $stmt = $conn->prepare($get_categories_query);
    $stmt->bind_param("i", $delete_id);
    $stmt->execute();
    $categories_result = $stmt->get_result();
    $category_ids = [];
    while ($row = $categories_result->fetch_assoc()) {
        $category_ids[] = $row['id'];
    }
```

```
if (!empty($category_ids)) {
        $placeholders = implode(',', array_fill(0, count($category_ids), '?'));
        $types = str_repeat('i', count($category_ids));
        $stmt = $conn->prepare("DELETE FROM expenses WHERE category_id IN ($placeholders)");
        $stmt->bind_param($types, ...$category_ids);
        $stmt->execute();
    }
    $stmt = $conn->prepare("DELETE FROM category_budget WHERE budget_id = ?");
    $stmt->bind_param("i", $delete_id);
    $stmt->execute();
    $stmt = $conn->prepare("DELETE FROM budgets WHERE id = ? AND user_id = ?");
    $stmt->bind_param("ii", $delete_id, $_SESSION['user_id'])
    if ($stmt->execute()) {
        header('Location: delete_budget.php');
        exit();
    } else {
        echo "Error deleting the budget.";
    }
}
$query = "SELECT id, title, amount FROM budgets WHERE user_id = ?";
$stmt = $conn->prepare($query);
$stmt->bind_param("i", $_SESSION['user_id']);
$stmt->execute();
$result = $stmt->get_result();
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <title>Delete Budget - Budget App</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet" />
    <style>
        body, html {
            margin: 0;
            padding: 0;
            font-family: 'Segoe UI', sans-serif;
        }
        .navbar {
            background-color: #6c63ff;
        }
        .navbar-brand, .nav-link {
```

```
            color: #fff !important;
        }
        .form-container {
            padding: 60px 20px;
            max-width: 800px;
            margin: 0 auto;
            background: linear-gradient(135deg, #eceef1, #f6f9fc);
            border-radius: 1rem;
        }
        .form-container h2 {
            color: #6c63ff;
        }
        .form-container .btn {
            background-color: #6c63ff;
            color: white;
        }
        .back-btn {
            margin-top: 80px;
            margin-bottom: 20px;
            display: block;
            width: 200px;
            text-align: center;
            background-color: #6c63ff;
            color: white;
            border: none;
            padding: 10px;
            border-radius: 5px;
            text-decoration: none;
        }
        .back-btn:hover {
            background-color: #5a53e6;
        }
    </style>
</head>
<body>
    <!-- Top Navbar -->
    <nav class="navbar navbar-expand-lg fixed-top">
        <div class="container-fluid justify-content-center">
            <a class="navbar-brand fw-bold text-center" href="#">BudgetApp</a>
        </div>
    </nav>
```

```
    <!-- Back to Dashboard Button -->
    <a href="dashboard.php" class="back-btn">Back to Dashboard</a>
    <!-- List of Budgets -->
    <div class="container mt-5">
      <h2>Your Budgets</h2>
      <?php if ($result->num_rows > 0): ?>
        <div class="list-group">
          <?php while ($budget_item = $result->fetch_assoc()): ?>
            <div class="list-group-item d-flex justify-content-between">
              <div>
                <h5 class="mb-1"><?php echo htmlspecialchars($budget_item['title']); ?></h5>
                <p class="mb-1">Amount: ₹<?php echo number_format($budget_item['amount'], 2); ?></p>
              </div>
              <div>
                <a href="delete_budget.php?delete_id=<?php echo $budget_item['id']; ?>" class="btn btn-danger
btn-sm">Delete</a>
              </div>
            </div>
          <?php endwhile; ?>
        </div>
      <?php else: ?>
        <p>No budgets found.</p>
      <?php endif; ?>
    </div>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
  </body>
</html>
```

Edit_budget.php:

```
  <?php
  session_start();
  if (!isset($_SESSION['user_id'])) {
    header('Location: login.php');
    exit();
  }
  $conn = new mysqli("localhost", "root", "", "budget_app");
  if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
  }
  $query = "SELECT id, title, amount, warning_triggered FROM budgets WHERE user_id = ?";
  $stmt = $conn->prepare($query);
  $stmt->bind_param("i", $_SESSION['user_id']);
```

```
$stmt->execute();
$result = $stmt->get_result();
$budget = null;
$categories = [];
if (isset($_GET['budget_id'])) {
    $budget_id = $_GET['budget_id'];
    $budget_query = "SELECT id, title, amount, warning_triggered FROM budgets WHERE id = ? AND user_id = ?";
    $stmt = $conn->prepare($budget_query);
    $stmt->bind_param("ii", $budget_id, $_SESSION['user_id']);
    $stmt->execute();
    $budget_result = $stmt->get_result();

    if ($budget_result->num_rows > 0) {
        $budget = $budget_result->fetch_assoc();
    } else {
        echo "Budget not found.";
        exit();
    }
    $categories_query = "SELECT id, category, amount FROM category_budget WHERE budget_id = ?";
    $stmt = $conn->prepare($categories_query);
    $stmt->bind_param("i", $budget_id);
    $stmt->execute();
    $categories_result = $stmt->get_result();
    while ($category = $categories_result->fetch_assoc()) {
        $categories[] = $category;
    }
}
if ($_SERVER['REQUEST_METHOD'] == 'POST') {
    $title = $_POST['title'];
    $amount = $_POST['amount'];
    $warning_triggered = isset($_POST['warning_triggered']) ? 1 : 0;
    $update_query = "UPDATE budgets SET title = ?, amount = ?, warning_triggered = ? WHERE id = ? AND user_id
= ?";
    $stmt = $conn->prepare($update_query);
    $stmt->bind_param("sdiii", $title, $amount, $warning_triggered, $budget_id, $_SESSION['user_id']);
    if ($stmt->execute()) {
        foreach ($_POST['categories'] as $category_id => $category_amount) {
            $category_amount = floatval($category_amount);
            $update_category_query = "UPDATE category_budget SET amount = ? WHERE id = ? AND budget_id = ?";
            $stmt = $conn->prepare($update_category_query);
            $stmt->bind_param("dii", $category_amount, $category_id, $budget_id);
```

```
            $stmt->execute();
        }
        header('Location: edit_budget.php');
        exit();
    } else {
        echo "Error updating the budget.";
    }
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <title>Edit Budget - Budget App</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet" />
    <style>
        body, html {
            margin: 0;
            padding: 0;
            font-family: 'Segoe UI', sans-serif;
        }
        .navbar {
            background-color: #6c63ff;
        }
        .navbar-brand, .nav-link {
            color: #fff !important;
        }
        .form-container {
            padding: 60px 20px;
            max-width: 800px;
            margin: 0 auto;
            background: linear-gradient(135deg, #eceef1, #f6f9fc);
            border-radius: 1rem;
        }
        .form-container h2 {
            color: #6c63ff;
        }
        .form-container .btn {
            background-color: #6c63ff;
            color: white;
        }
```

```
 .back-btn {
        margin-top: 80px;
        margin-bottom: 20px;
        display: block;
        width: 200px;
        text-align: center;
        background-color: #6c63ff;
        color: white;
        border: none;
        padding: 10px;
        border-radius: 5px;
        text-decoration: none;
    }
    .back-btn:hover {
        background-color: #5a53e6;
    }
  </style>
</head>
<body>
  <!-- Top Navbar -->
  <nav class="navbar navbar-expand-lg fixed-top">
    <div class="container-fluid justify-content-center">
      <a class="navbar-brand fw-bold text-center" href="#">BudgetApp</a>
    </div>
  </nav>
  <!-- Back to Dashboard Button -->
  <a href="dashboard.php" class="back-btn">Back to Dashboard</a>
  <!-- List of Budgets -->
  <div class="container mt-5">
    <h2>Your Budgets</h2>
    <?php if ($result->num_rows > 0): ?>
      <div class="list-group">
        <?php while ($budget_item = $result->fetch_assoc()): ?>
          <a href="edit_budget.php?budget_id=<?php echo $budget_item['id']; ?>" class="list-group-item list-
group-item-action">
            <div class="d-flex justify-content-between">
              <h5 class="mb-1"><?php echo htmlspecialchars($budget_item['title']); ?></h5>
              <small>₹<?php echo number_format($budget_item['amount'], 2); ?></small>
            </div>
            <p class="mb-1">Warning Triggered: <?php echo $budget_item['warning_triggered'] ? 'Yes' : 'No';
?></p>
```

```
</a>
            <?php endwhile; ?>
          </div>
        <?php else: ?>
          <p>No budgets found.</p>
        <?php endif; ?>
      </div>
      <!-- Edit Budget Form (only show if a budget is selected) -->
      <?php if ($budget): ?>
        <div class="form-container mt-5">
          <h2>Edit Budget</h2>
          <form action="edit_budget.php?budget_id=<?php echo $budget['id']; ?>" method="POST">
            <!-- Budget Information -->
            <div class="mb-3">
              <label for="title" class="form-label">Budget Title</label>
              <input type="text" class="form-control" id="title" name="title" value="<?php echo
htmlspecialchars($budget['title']); ?>" required>
            </div>
            <div class="mb-3">
              <label for="amount" class="form-label">Total Budget Amount (₹)</label>
              <input type="number" class="form-control" id="amount" name="amount" value="<?php echo
htmlspecialchars($budget['amount']); ?>" step="0.01" required>
            </div>
            <div class="mb-3 form-check">
              <input type="checkbox" class="form-check-input" id="warning_triggered" name="warning_triggered"
<?php echo $budget['warning_triggered'] ? 'checked' : ''; ?>>
              <label class="form-check-label" for="warning_triggered">Warning Triggered</label>
            </div>
            <!-- Category Information -->
            <h4>Categories</h4>
            <?php foreach ($categories as $category): ?>
              <div class="mb-3">
                <label for="category_<?php echo $category['id']; ?>" class="form-label"><?php echo
htmlspecialchars($category['category']); ?> (₹)</label>
                <input type="number" class="form-control" id="category_<?php echo $category['id']; ?>"
name="categories[<?php echo $category['id']; ?>]" value="<?php echo htmlspecialchars($category['amount']);
?>" step="0.01" required>
              </div>
            <?php endforeach; ?>
            <button type="submit" class="btn btn-primary">Update Budget</button>
          </form>
        </div>
      <?php endif; ?>
```

```
    <script src="https: //cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Expence_screen.php:

```
<?php
session_start();
if (!isset($_SESSION['user_id'])) {
    header('Location: login.php');
    exit();
}
$username = $_SESSION['username'];
$conn = new mysqli("localhost", "root", "", "budget_app");
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
$budget_query = "
    SELECT b.id, b.title, b.amount AS allocated_amount
    FROM budgets b
    WHERE b.user_id = ?";
$stmt = $conn->prepare($budget_query);
$stmt->bind_param("i", $_SESSION['user_id']);
$stmt->execute();
$budget_result = $stmt->get_result();
$expense_query = "
    SELECT SUM(e.amount) AS total_spent, DATE(e.date) AS expense_date
    FROM expenses e
    JOIN budgets b ON e.budget_id = b.id
    WHERE b.user_id = ?
    GROUP BY DATE(e.date)";
$stmt = $conn->prepare($expense_query);
$stmt->bind_param("i", $_SESSION['user_id']);
$stmt->execute();
$expense_result = $stmt->get_result();
$total_spent_by_date = [];
while ($expense = $expense_result->fetch_assoc()) {
    $total_spent_by_date[$expense['expense_date']] = $expense['total_spent'];
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
```

```
<meta charset="UTF-8" />
<title>Expense Screen - Budget App</title>
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet" />
<link href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.10.5/font/bootstrap-icons.css" rel="stylesheet" />
<style>
 body, html {
  margin: 0;
  padding: 0;
  height: 100%;
  font-family: 'Segoe UI', sans-serif;
 }
 .navbar {
  background-color: #6c63ff;
 }
 .navbar-brand, .nav-link {
  color: #fff !important;
 }
 .dashboard {
  padding: 80px 20px 40px;
  min-height: 100vh;
  background: linear-gradient(135deg, #eceef1, #f6f9fc);
  overflow-y: auto;
 }
 .card-box {
  border-radius: 1rem;
  box-shadow: 0 10px 25px rgba(0, 0, 0, 0.05);
  padding: 20px;
  background: white;
  height: 100%;
 }
 .card-title {
  font-size: 0.95rem;
  font-weight: 600;
  color: #6c63ff;
 }
 .card-value {
  font-size: 1.5rem;
  font-weight: bold;
  color: #333;
 }
 .action-buttons .btn {
```

```
      background-color: #6c63ff;
      color: white;
      margin: 10px;
      border-radius: 0.5rem;
      min-width: 180px;
    }
    .section-header {
      font-weight: bold;
      font-size: 1.3rem;
      margin-top: 50px;
      margin-bottom: 20px;
      color: #333;
    }
    .budget-item {
      margin-top: 20px;
      padding: 10px;
      background-color: #fff;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
      border-radius: 10px;
    }
    .budget-item h5 {
      font-size: 1.2rem;
      font-weight: 600;
    }
    .budget-item .amount {
      font-size: 1rem;
      color: #333;
    }
    .back-btn {
      background-color: #6c63ff;
      color: white;
      margin-left: 20px;
      border-radius: 0.5rem;
    }
  </style>
</head>
<body>
  <!-- Top Navbar -->
  <nav class="navbar navbar-expand-lg fixed-top">
    <div class="container-fluid justify-content-between">
      <a class="navbar-brand fw-bold text-center" href="#">BudgetApp</a>
      <a href="dashboard.php" class="btn back-btn">Back to Dashboard</a>
```

```
      </div>
    </nav>
    <!-- Scrollable Dashboard -->
    <div class="dashboard container-fluid">
     <div class="container">
      <h2 class="fw-bold">Welcome, <?php echo htmlspecialchars($username); ?>!</h2>
      <p class="text-muted">View your budget and expenses</p>
      <!-- Budget and Expenses -->
      <h4 class="section-header">Budget Overview</h4>
      <div class="row g-4">
       <?php while ($budget = $budget_result->fetch_assoc()): ?>
        <div class="col-md-4">
         <div class="budget-item">
          <h5><?php echo htmlspecialchars($budget['title']); ?></h5> <!-- Displaying the budget title -->
          <div class="amount">
           <p>Allocated: ₹<?php echo number_format($budget['allocated_amount'], 2); ?></p>
           <?php
           $total_spent = 0;
           foreach ($total_spent_by_date as $date => $spent) {
              $total_spent += $spent;
           ?>
              <p>Spent on <?php echo $date; ?>: ₹<?php echo number_format($spent, 2); ?></p>
           <?php
           }
           ?>
           <p>Total Spent: ₹<?php echo number_format($total_spent, 2); ?></p>
           <p>Remaining Balance: ₹<?php echo number_format($budget['allocated_amount'] - $total_spent, 2);
  ?></p>
          </div>
         </div>
        </div>
       <?php endwhile; ?>
      </div>
     </div>
    </div>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
  </body>
</html>
```

Expence_tracker.php:

```
  <?php
  session_start();
```

```
if (!isset($_SESSION['user_id'])) {
    header('Location: login.php');
    exit();
}

$conn = new mysqli("localhost", "root", "", "budget_app");
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
$budgets_query = "SELECT id, title FROM budgets WHERE user_id = ?";
$stmt = $conn->prepare($budgets_query);
$stmt->bind_param("i", $_SESSION['user_id']);
$stmt->execute();
$budgets_result = $stmt->get_result();
if ($_SERVER["REQUEST_METHOD"] === "POST") {
    $budget_id = $_POST['budget_id'];
    $category_id = $_POST['category_id'];
    $amount = $_POST['amount'];
    $category_budget_query = "SELECT amount FROM category_budget WHERE budget_id = ? AND id = ?";
    $stmt = $conn->prepare($category_budget_query);
    $stmt->bind_param("ii", $budget_id, $category_id);
    $stmt->execute();
    $category_budget_result = $stmt->get_result();
    $category_budget = $category_budget_result->fetch_assoc()['amount'];
    $total_expense_query = "SELECT SUM(amount) AS total_expense FROM expenses WHERE budget_id = ? AND
category_id = ?";
    $stmt = $conn->prepare($total_expense_query);
    $stmt->bind_param("ii", $budget_id, $category_id);
    $stmt->execute();
    $total_expense_result = $stmt->get_result();
    $total_expense = $total_expense_result->fetch_assoc()['total_expense'];
    $warning_message = null;
    if ($total_expense + $amount > $category_budget) {
        $warning_message = "Warning: Expense for this category has exceeded the budget!";
    }
    $expense_query = "INSERT INTO expenses (budget_id, category_id, amount, warning_message) VALUES (?, ?, ?,
?)";
    $stmt = $conn->prepare($expense_query);
    $stmt->bind_param("iiis", $budget_id, $category_id, $amount, $warning_message);
    if ($stmt->execute()) {
        $success_message = "Expense recorded successfully!";
    } else {
```

```
        $error_message = "Failed to record the expense!";
    }
}
if (isset($_POST['budget_id']) || isset($_GET['budget_id'])) {
    $budget_id = isset($_POST['budget_id']) ? $_POST['budget_id'] : $_GET['budget_id'];
    $categories_query = "SELECT id, category FROM category_budget WHERE budget_id = ?";
    $stmt = $conn->prepare($categories_query);
    $stmt->bind_param("i", $budget_id);
    $stmt->execute();
    $categories_result = $stmt->get_result();
} else {
    $categories_result = [];
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Expense Tracker</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <script>
        function fetchCategories() {
            var budget_id = document.getElementById('budget_id').value;
            if (budget_id) {
                var xhr = new XMLHttpRequest();
                xhr.open("GET", "fetch_categories.php?budget_id=" + budget_id, true);
                xhr.onload = function() {
                    if (xhr.status === 200) {
                        document.getElementById('category_id').innerHTML = xhr.responseText;
                    }
                };
                xhr.send();
            }
        }
    </script>
</head>
<body>
<div class="container mt-5">
    <h2 class="text-center">Expense Tracker</h2>
    <!-- Display Success or Error Message -->
    <?php if (isset($success_message)): ?>
```

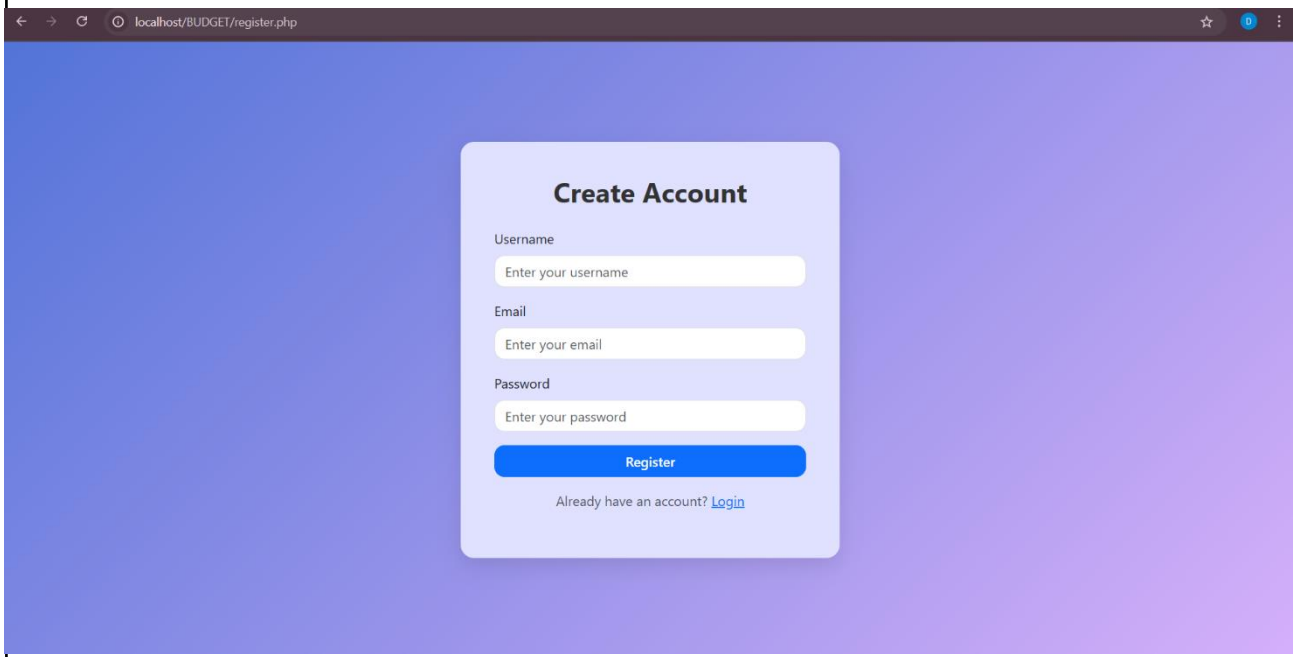
```
        <div class="alert alert-success"><?php echo $success_message; ?></div>
    <?php elseif (isset($error_message)): ?>
        <div class="alert alert-danger"><?php echo $error_message; ?></div>
    <?php elseif (isset($warning_message)): ?>
        <div class="alert alert-warning"><?php echo $warning_message; ?></div>
    <?php endif; ?>
    <!-- Expense Form -->
    <form method="POST" action="">
        <div class="mb-3">
            <label for="budget_id" class="form-label">Select Budget</label>
            <select class="form-select" id="budget_id" name="budget_id" required onchange="fetchCategories()">
                <option value="">Select Budget</option>
                <?php while ($row = $budgets_result->fetch_assoc()): ?>
                    <option value="<?php echo $row['id']; ?>" <?php echo (isset($budget_id) && $budget_id ==
$row['id']) ? 'selected' : ''; ?>>
                        <?php echo $row['title']; ?>
                    </option>
                <?php endwhile; ?>
            </select>
        </div>
        <div class="mb-3">
            <label for="category_id" class="form-label">Select Category</label>
            <select class="form-select" id="category_id" name="category_id" required>
                <option value="">Select Category</option>
                <?php if (!empty($categories_result)): ?>
                    <?php while ($row = $categories_result->fetch_assoc()): ?>
                        <option value="<?php echo $row['id']; ?>"><?php echo $row['category']; ?></option>
                    <?php endwhile; ?>
                <?php endif; ?>
            </select>
        </div>
        <div class="mb-3">
            <label for="amount" class="form-label">Amount</label>
            <input type="number" class="form-control" id="amount" name="amount" required>
        </div>
        <button type="submit" class="btn btn-primary">Add Expense</button>
    </form>
    <!-- Back to Dashboard Button -->
    <div class="mt-3">
        <a href="dashboard.php" class="btn btn-secondary">Back to Dashboard</a>
    </div>
</div>
```

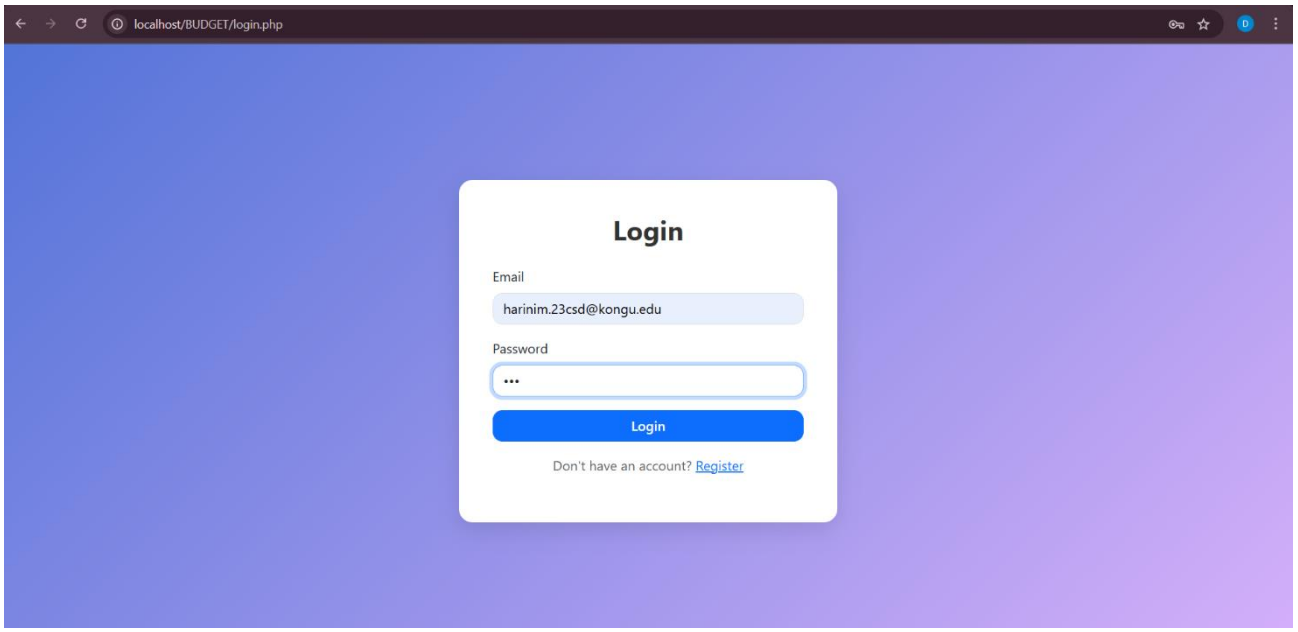
```
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
    </body>
</html>
```

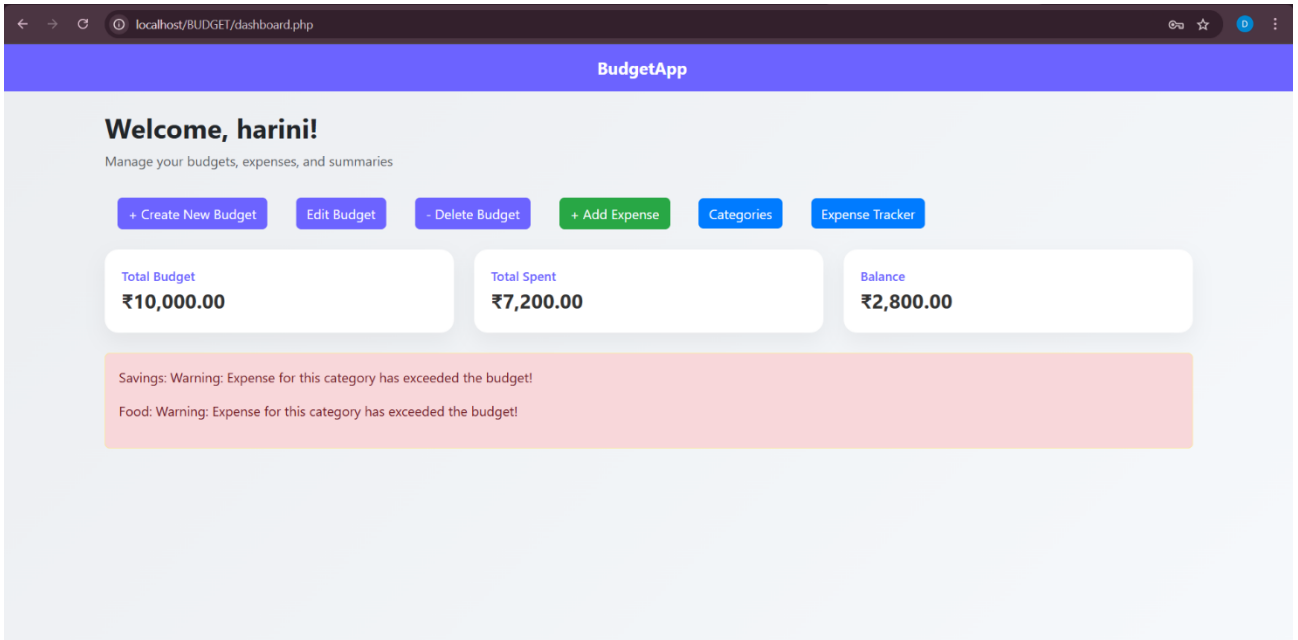
Fetch_actegory.php:

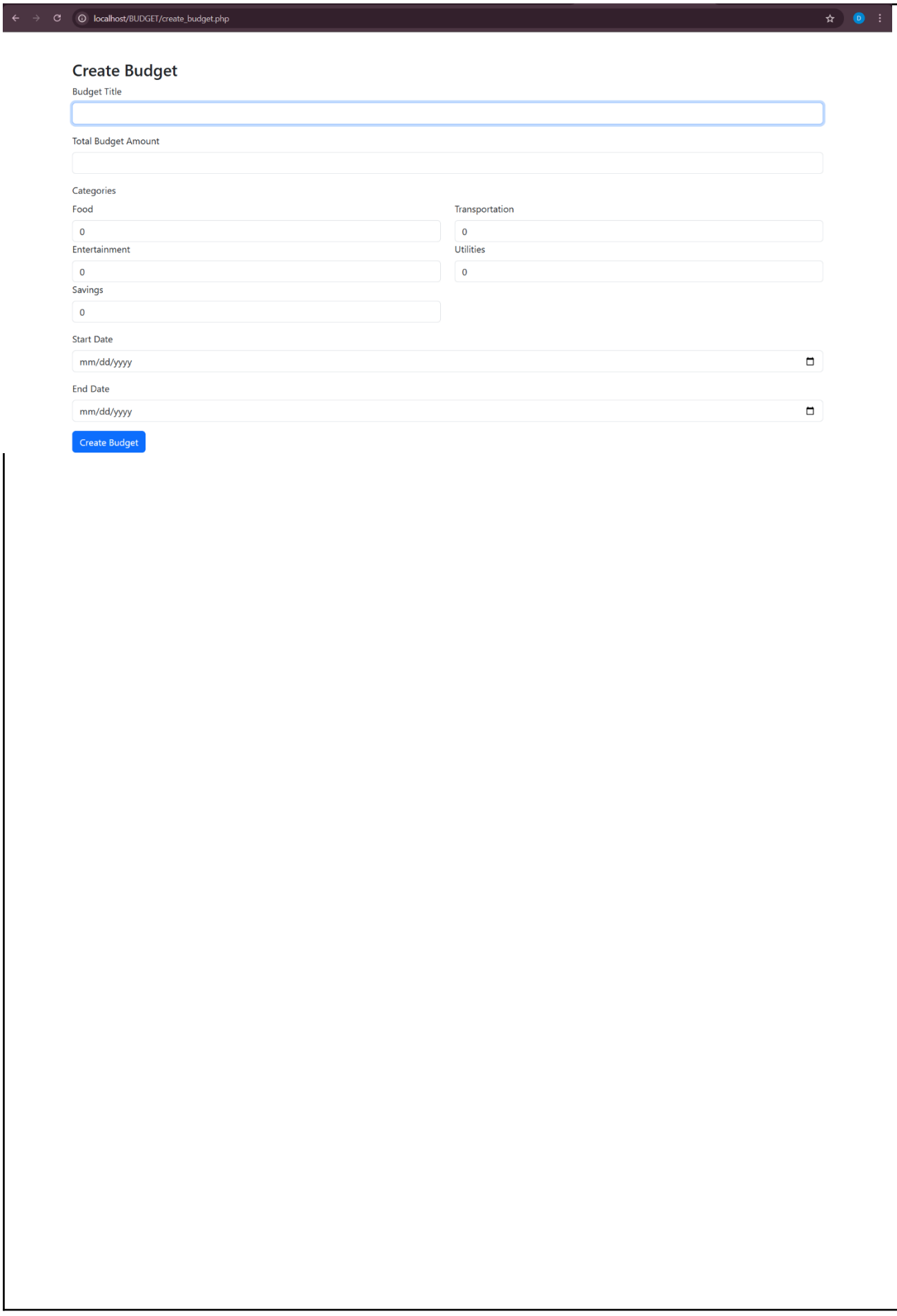
```
    <?php
    if (isset($_GET['budget_id'])) {
       $budget_id = $_GET['budget_id'];
       $conn = new mysqli("localhost", "root", "", "budget_app");
       if ($conn->connect_error) {
          die("Connection failed: " . $conn->connect_error);
       }

       $categories_query = "SELECT id, category FROM category_budget WHERE budget_id = ?";
       $stmt = $conn->prepare($categories_query);
       $stmt->bind_param("i", $budget_id);
       $stmt->execute();
       $categories_result = $stmt->get_result();
       while ($row = $categories_result->fetch_assoc()) {
          echo "<option value='{$row['id']}'>{$row['category']}</option>";
       }
       $stmt->close();
       $conn->close();
    }
```

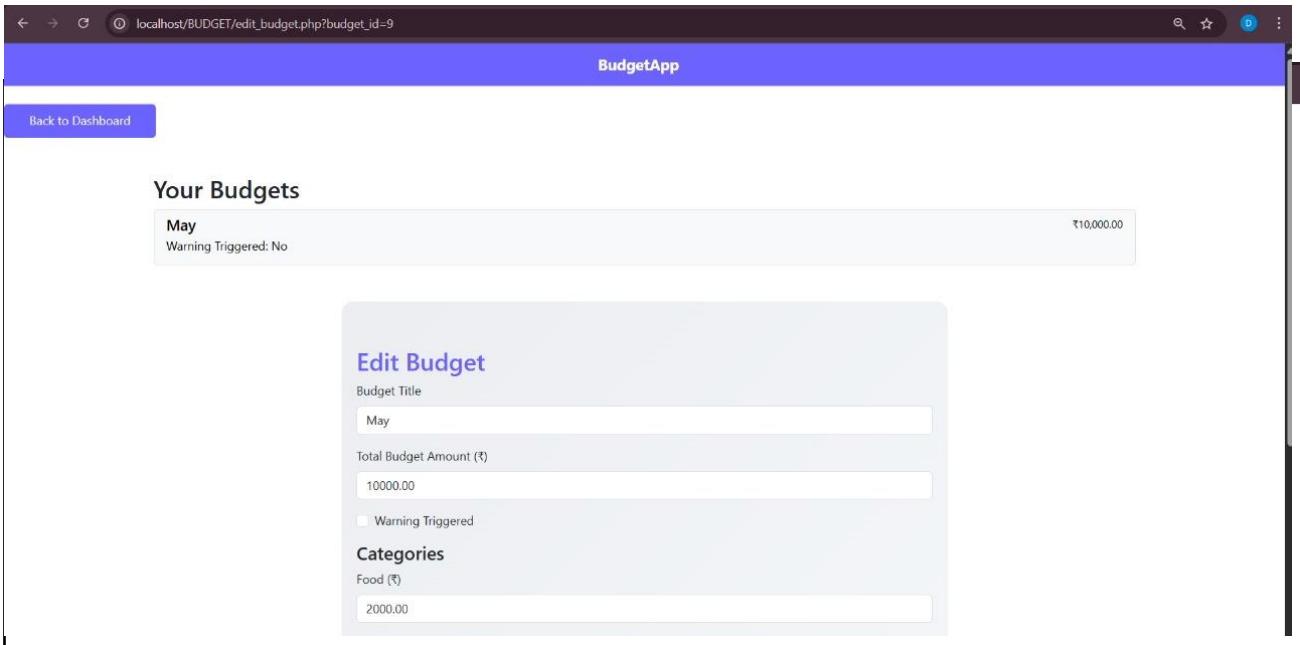
Output:

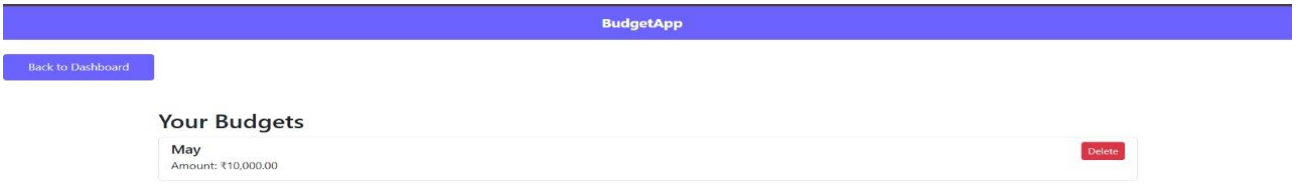


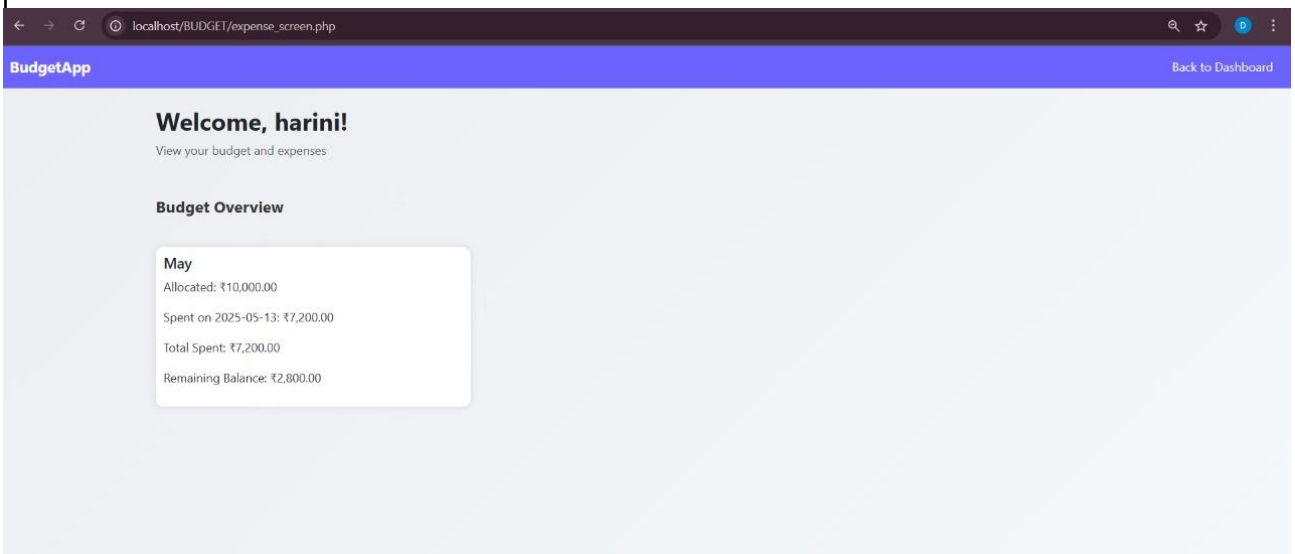

localhost/BUDGET/login.php
Login
Email
harinim.23csd@kongu.edu
Password
Login
Don't have an account? Register

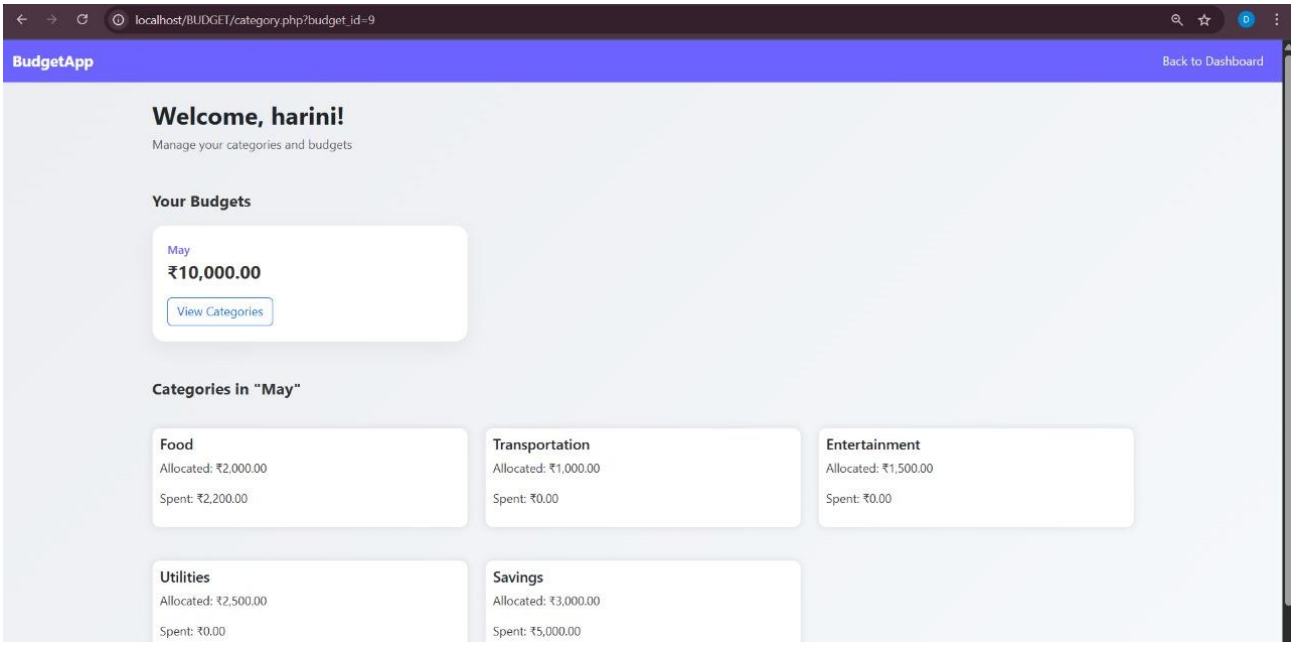

localhost/BUDGET/dashboard.php
BudgetApp
Welcome, harini!
Manage your budgets, expenses, and summaries
+ Create New Budget
Edit Budget
- Delete Budget
+ Add Expense
Categories
Expense Tracker
Total Budget
₹10,000.00
Total Spent
₹7,200.00
Balance
₹2,800.00
Savings: Warning: Expense for this category has exceeded the budget!
Food: Warning: Expense for this category has exceeded the budget!


localhost/BUDGET/create_budget.php
Create Budget
Budget Title
Total Budget Amount
Categories
Food
0
Transportation
0
Entertainment
0
Utilities
0
Savings
0
Start Date
mm/dd/yyyy
End Date
mm/dd/yyyy
Create Budget


localhost/BUDGET/edit_budget.php?budget_id=9
BudgetApp
Back to Dashboard
Your Budgets
May
₹10,000.00
Warning Triggered: No
Edit Budget
Budget Title
May
Total Budget Amount (₹)
10000.00
Warning Triggered
Categories
Food (₹)
2000.00


BudgetApp
Back to Dashboard
Your Budgets
May
Amount: ₹10,000.00
Delete


localhost/BUDGET/expense_screen.php
BudgetApp
Back to Dashboard
Welcome, harini!
View your budget and expenses
Budget Overview
May
Allocated: ₹10,000.00
Spent on 2025-05-13: ₹7,200.00
Total Spent: ₹7,200.00
Remaining Balance: ₹2,800.00


localhost/BUDGET/category.php?budget_id=9
BudgetApp
Back to Dashboard
Welcome, harini!
Manage your categories and budgets
Your Budgets
May
₹10,000.00
View Categories
Categories in "May"
Food
Allocated: ₹2,000.00
Spent: ₹2,200.00
Transportation
Allocated: ₹1,000.00
Spent: ₹0.00
Entertainment
Allocated: ₹1,500.00
Spent: ₹0.00
Utilities
Allocated: ₹2,500.00
Spent: ₹0.00
Savings
Allocated: ₹3,000.00
Spent: ₹5,000.00

Reference:

- **Database Book**
  Date, C. J., *Introduction to Database Systems*, 8th ed. Boston: Pearson, 2003.
- https://www.php.net/manual/en/
- https://www.freecodecamp.org/news/tag/php/
- https://www.practicalmoneyskills.com/