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| E:\AVPTI\ISRO\Logos_RKM\avpti.png  **Expense Tracker**  **Affiliated to Gujarat Technological University** |
| SEMESTER 5 COMPUTER ENGINEERING DEPARTMENT WBJP(4350701) |
| MICRO PROJECT TITLE Expense Tracker  STUDENTS’ GROUP DETAILS   |  |  | | --- | --- | | Chaitany | 226020307206 | |
|  |

Introduction

The Expense Tracker is a web application designed to help users manage their personal finances by tracking their expenses. Users can add, edit, and delete expenses, and view their spending over time. The application is designed to be user-friendly, ensuring that users can quickly access their financial information.

Abstract

This project aims to provide an intuitive platform for users to keep track of their daily expenditures. The Expense Tracker allows users to log their expenses with details such as date, time, description, and amount. It also offers functionalities like filtering expenses by date and a clean, responsive user interface. By implementing this application, users can make informed financial decisions and gain better control over their spending habits.

Technologies Used

* Frontend JavaServer Pages (JSP), HTML, CSS, JavaScript
* Backend: Java(jsp)
* Database: MySQL
* Server: Apache Tomcat

File Structure

Expense\_Tracker/

|--- WEB-INF/

|      |--- web.xml (configuration file)

|--- dbcon.jsp (database connection file)

|--- login.jsp (user login page)

|--- signup.jsp (user signup page)

|--- viewExpence.jsp (view expenses page)

|--- addExpence.jsp (add new expense page)

|--- editExpence.jsp (edit existing expense page)

|--- removeExpence.jsp (remove an expense)

|--- style.css (external CSS file for styling)

*web.xml*

*This file defines the configuration for the web application, including the welcome file and servlet mappings.*

*<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"*

*xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"*

*xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee*

*http://xmlns.jcp.org/xml/ns/javaee/web-app\_3\_1.xsd"*

*version="3.1">*

*<welcome-file-list>*

*<welcome-file>login.jsp</welcome-file>*

*</welcome-file-list>*

*</web-app>*

*dbcon.jsp*

*This file manages the database connection.*

*<%@ page import="java.sql.\*" %>*

*<%*

*String url = "jdbc:mysql://localhost:3306/expense\_tracker";*

*String user = "root";*

*String password = "password";*

*try {*

*Class.forName("com.mysql.jdbc.Driver");*

*Connection con = DriverManager.getConnection(url, user, password);*

*application.setAttribute("dbcon", con);*

*} catch (Exception e) {*

*e.printStackTrace();*

*}*

*%>*

*login.jsp*

*Handles user login.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<html>*

*<head>*

*<title>Login</title>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*</head>*

*<body>*

*<div class="container">*

*<h2>Login</h2>*

*<form action="login.jsp" method="post">*

*Email: <input type="email" name="email" required><br>*

*Password: <input type="password" name="password" required><br>*

*<input type="submit" value="Login" class="btn">*

*</form>*

*<p>If you do not have an account, <a href="signup.jsp">Sign up</a></p>*

*</div>*

*<%*

*if (request.getMethod().equals("POST")) {*

*String email = request.getParameter("email");*

*String password = request.getParameter("password");*

*Connection con = (Connection)application.getAttribute("dbcon");*

*PreparedStatement ps = con.prepareStatement("SELECT id FROM users WHERE email=? AND password=?");*

*ps.setString(1, email);*

*ps.setString(2, password);*

*ResultSet rs = ps.executeQuery();*

*if (rs.next()) {*

*HttpSession session = request.getSession();*

*session.setAttribute("userid", rs.getInt("id"));*

*response.sendRedirect("viewExpence.jsp");*

*} else {*

*out.println("Invalid credentials");*

*}*

*}*

*%>*

*</body>*

*</html>*

*signup.jsp*

*Handles user registration.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<html>*

*<head>*

*<title>Sign Up</title>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*</head>*

*<body>*

*<div class="container">*

*<h2>Sign Up</h2>*

*<form action="signup.jsp" method="post">*

*Email: <input type="email" name="email" required><br>*

*Password: <input type="password" name="password" required><br>*

*Username: <input type="text" name="username" required><br>*

*<input type="submit" value="Sign Up" class="btn">*

*</form>*

*<p>If you already have an account, <a href="login.jsp">Login</a></p>*

*</div>*

*<%*

*if (request.getMethod().equals("POST")) {*

*String email = request.getParameter("email");*

*String password = request.getParameter("password");*

*String username = request.getParameter("username");*

*Connection con = (Connection)application.getAttribute("dbcon");*

*PreparedStatement ps = con.prepareStatement("INSERT INTO users(email, password, username) VALUES(?, ?, ?)");*

*ps.setString(1, email);*

*ps.setString(2, password);*

*ps.setString(3, username);*

*ps.executeUpdate();*

*response.sendRedirect("login.jsp");*

*}*

*%>*

*</body>*

*</html>*

*viewExpence.jsp*

*Displays user expenses with an option to filter by date.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<html>*

*<head>*

*<title>View Expenses</title>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*</head>*

*<body>*

*<div class="container">*

*<h2>Your Expenses</h2>*

*<a href="login.jsp" class="btn">Logout</a>*

*<%*

*if (session.getAttribute("userid") == null) {*

*response.sendRedirect("login.jsp");*

*}*

*Connection con = (Connection)application.getAttribute("dbcon");*

*int userid = (Integer)session.getAttribute("userid");*

*String dateFilter = request.getParameter("date");*

*String query = "SELECT \* FROM expenses WHERE userid=?";*

*if (dateFilter != null && !dateFilter.isEmpty()) {*

*query += " AND date=?";*

*}*

*PreparedStatement ps = con.prepareStatement(query);*

*ps.setInt(1, userid);*

*if (dateFilter != null && !dateFilter.isEmpty()) {*

*ps.setString(2, dateFilter);*

*}*

*ResultSet rs = ps.executeQuery();*

*%>*

*<form action="viewExpence.jsp" method="get">*

*Date: <input type="date" name="date" value="<%= dateFilter != null ? dateFilter : "" %>">*

*<input type="submit" value="Filter" class="btn">*

*</form>*

*<table>*

*<tr>*

*<th>Date</th>*

*<th>Time</th>*

*<th>Description</th>*

*<th>Amount</th>*

*<th>Actions</th>*

*</tr>*

*<%*

*while (rs.next()) {*

*%>*

*<tr>*

*<td><%= rs.getString("date") %></td>*

*<td><%= rs.getString("time") %></td>*

*<td><%= rs.getString("description") %></td>*

*<td><%= rs.getDouble("amount") %></td>*

*<td>*

*<a href="editExpence.jsp?id=<%= rs.getInt("id") %>">Edit</a>*

*<a href="removeExpence.jsp?id=<%= rs.getInt("id") %>">Remove</a>*

*</td>*

*</tr>*

*<%*

*}*

*%>*

*</table>*

*<a href="addExpence.jsp" class="btn">Add New Expense</a>*

*</div>*

*</body>*

*</html>*

*addExpence.jsp*

*Allows users to add new expenses.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<html>*

*<head>*

*<title>Add Expense</title>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*<script>*

*window.onload = function() {*

*var today = new Date();*

*var date = today.toISOString().split('T')[0];*

*document.getElementById("date").value = date;*

*var time = today.toTimeString().split(' ')[0].substring(0, 5);*

*document.getElementById("time").value = time;*

*};*

*</script>*

*</head>*

*<body>*

*<div class="container">*

*<h2>Add New Expense</h2>*

*<form action="addExpence.jsp" method="post">*

*Date: <input type="date" id="date" name="date" required><br>*

*Time: <input type="time" id="time" name="time" required><br>*

*Description: <input type="text" name="description" required><br>*

*Amount: <input type="number" step="0.01" name="amount" required><br>*

*<input type="submit" value="Add Expense" class="btn">*

*</form>*

*</div>*

*</body>*

*</html>*

*<%*

*if (request.getMethod().equals("POST")) {*

*int userid = (Integer)session.getAttribute("userid");*

*String date = request.getParameter("date");*

*String time = request.getParameter("time");*

*String description = request.getParameter("description");*

*double amount = Double.parseDouble(request.getParameter("amount"));*

*Connection con = (Connection)application.getAttribute("dbcon");*

*PreparedStatement ps = con.prepareStatement("INSERT INTO expenses(userid, date, time, description, amount) VALUES(?, ?, ?, ?, ?)");*

*ps.setInt(1, userid);*

*ps.setString(2, date);*

*ps.setString(3, time);*

*ps.setString(4, description);*

*ps.setDouble(5, amount);*

*ps.executeUpdate();*

*response.sendRedirect("viewExpence.jsp");*

*}*

*%>*

*editExpence.jsp*

*Allows users to edit existing expenses.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<html>*

*<head>*

*<title>Edit Expense</title>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*</head>*

*<body>*

*<div class="container">*

*<h2>Edit Expense</h2>*

*<%*

*int id = Integer.parseInt(request.getParameter("id"));*

*Connection con = (Connection)application.getAttribute("dbcon");*

*PreparedStatement ps = con.prepareStatement("SELECT \* FROM expenses WHERE id=?");*

*ps.setInt(1, id);*

*ResultSet rs = ps.executeQuery();*

*if (rs.next()) {*

*%>*

*<form action="editExpence.jsp?id=<%= id %>" method="post">*

*Date: <input type="date" name="date" value="<%= rs.getString("date") %>" required><br>*

*Time: <input type="time" name="time" value="<%= rs.getString("time") %>" required><br>*

*Description: <input type="text" name="description" value="<%= rs.getString("description") %>" required><br>*

*Amount: <input type="number" step="0.01" name="amount" value="<%= rs.getDouble("amount") %>" required><br>*

*<input type="submit" value="Save Changes" class="btn">*

*</form>*

*<%*

*}*

*%>*

*</div>*

*</body>*

*</html>*

*<%*

*if (request.getMethod().equals("POST")) {*

*String date = request.getParameter("date");*

*String time = request.getParameter("time");*

*String description = request.getParameter("description");*

*double amount = Double.parseDouble(request.getParameter("amount"));*

*ps = con.prepareStatement("UPDATE expenses SET date=?, time=?, description=?, amount=? WHERE id=?");*

*ps.setString(1, date);*

*ps.setString(2, time);*

*ps.setString(3, description);*

*ps.setDouble(4, amount);*

*ps.setInt(5, id);*

*ps.executeUpdate();*

*response.sendRedirect("viewExpence.jsp");*

*}*

*%>*

*removeExpence.jsp*

*Allows users to remove an expense.*

*<%@ page import="java.sql.\*, javax.servlet.\*, javax.servlet.http.\*" %>*

*<%@ include file="dbcon.jsp" %>*

*<%*

*int id = Integer.parseInt(request.getParameter("id"));*

*Connection con = (Connection)application.getAttribute("dbcon");*

*PreparedStatement ps = con.prepareStatement("DELETE FROM expenses WHERE id=?");*

*ps.setInt(1, id);*

*ps.executeUpdate();*

*response.sendRedirect("viewExpence.jsp");*

*%>*

*style.css*

*This file contains the styles for the web application.*

*body {*

*background-color: #f5f6fa;*

*color: #2d3436;*

*font-family: Arial, sans-serif;*

*}*

*.container {*

*width: 80%;*

*margin: auto;*

*overflow: hidden;*

*}*

*h2 {*

*text-align: center;*

*}*

*form {*

*margin: 20px 0;*

*}*

*input[type="date"], input[type="time"],input[type="text"],input[type="number"] {*

*width: 100%;*

*padding: 10px;*

*margin: 10px 0;*

*border: 1px solid #ccc;*

*}*

*input[type="submit"],*

*.btn {*

*background-color: #f39c12;*

*color: white;*

*padding: 10px;*

*border: none;*

*cursor: pointer;*

*}*

*input[type="submit"]:hover,*

*.btn:hover {*

*background-color: #e67e22;*

*}*

*table {*

*width: 100%;*

*border-collapse: collapse;*

*margin: 20px 0;*

*}*

*th, td {*

*border: 1px solid #ccc;*

*padding: 8px;*

*text-align: left;*

*}*

*th {*

*background-color: #f39c12;*

*color: white;*

*}*

DATABASE

Database: `expensetracker`

|  |  |
| --- | --- |
| CREATE TABLE `expenses` (    `id` *int*(11) NOT NULL,    `userid` *int*(11) DEFAULT NULL,    `date` *date* DEFAULT NULL,    `time` *time* DEFAULT NULL,    `description` *varchar*(255) DEFAULT NULL,    `amount` *decimal*(10,2) DEFAULT NULL ); | CREATE TABLE `users` (    `id` *int*(11) NOT NULL,    `uname` *varchar*(100) DEFAULT NULL,    `email` *varchar*(100) DEFAULT NULL,    `password` *varchar*(100) DEFAULT NULL  ) ; |

Conclusion

The Expense Tracker project is a comprehensive tool for personal financial management. It allows users to efficiently track their expenses, providing a clear overview of their financial status. The use of JSP, Java, and MySQL ensures that the application is both powerful and scalable. Future enhancements could include advanced reporting features, budget tracking, and integration with financial.

OUTPUT

A screenshot of a login form

Description automatically generated A screenshot of a login form

Description automatically generated

A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

After remove

|  |  |  |  |
| --- | --- | --- | --- |
| 2024-10-23 | 01:08:00 | for Goods | 100.0 |

A screenshot of a computer

Description automatically generated