Database Setup File (database_setup.sql)

```sql
-- 1. Create Database
CREATE DATABASE elvira_finance_tracker;
USE elvira_finance_tracker;

-- 2. Create Users Table
CREATE TABLE users (
    user_id INT AUTO_INCREMENT PRIMARY KEY,
    full_name VARCHAR(255) NOT NULL,
    email VARCHAR(255) UNIQUE NOT NULL,
    password_hash VARCHAR(255) NOT NULL,
    phone VARCHAR(20),
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);

-- 3. Create Transactions Table
CREATE TABLE transactions (
    transaction_id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    amount DECIMAL(10,2) NOT NULL,
    category VARCHAR(100) NOT NULL,
    transaction_type ENUM('income', 'expense') NOT NULL,
    date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES users(user_id) ON DELETE CASCADE
);

-- 4. Create Budgets Table
CREATE TABLE budgets (
    budget_id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    category VARCHAR(100) NOT NULL,
    amount DECIMAL(10,2) NOT NULL,
    start_date DATE NOT NULL,
    end_date DATE NOT NULL,
    FOREIGN KEY (user_id) REFERENCES users(user_id) ON DELETE CASCADE
);
```

```sql
-- 5. Create Loyalty Points Table
CREATE TABLE loyalty_points (
    loyalty_id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    points INT DEFAULT 0,
    last_updated TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES users(user_id) ON DELETE CASCADE
);

-- 6. Create Alerts Table
CREATE TABLE alerts (
    alert_id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    message TEXT NOT NULL,
    alert_type ENUM('budget_limit', 'promotion', 'transaction_alert') NOT NULL,
    is_read BOOLEAN DEFAULT FALSE,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES users(user_id) ON DELETE CASCADE
);

-- 7. Insert Sample Data
INSERT INTO users (full_name, email, password_hash, phone) VALUES
('John Doe', 'johndoe@example.com', 'hashedpassword123', '08012345678'),
('Jane Smith', 'janesmith@example.com', 'hashedpassword456', '09087654321');

INSERT INTO transactions (user_id, amount, category, transaction_type) VALUES
(1, 5000, 'Groceries', 'expense'),
(2, 15000, 'Salary', 'income');

INSERT INTO budgets (user_id, category, amount, start_date, end_date) VALUES
(1, 'Groceries', 20000, '2025-04-01', '2025-04-30');

INSERT INTO loyalty_points (user_id, points) VALUES
(1, 50),
(2, 100);
```

```
INSERT INTO alerts (user_id, message, alert_type) VALUES
(1, 'You have reached 80% of your grocery budget!', 'budget_limit'),
(2, 'New promotion available: 20% off all items!', 'promotion');
```

Database Connection File (db_connect.php)

```php
<?php
$servername = "localhost";
$username = "root";  // Change if using a different database user
$password = "";     // Add your database password if needed
$dbname = "elvira_finance_tracker";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
?>
```

```
// Elvira Finance Tracker - Complete Codebase

// App.js - Main Component
import React from "react";
import { BrowserRouter as Router, Route, Routes } from "react-router-dom";
import Dashboard from "./components/Dashboard";
import BudgetManager from "./components/BudgetManager";
import ExpenseTracker from "./components/ExpenseTracker";
import Alerts from "./components/Alerts";
import LoyaltyProgram from "./components/LoyaltyProgram";
import Navbar from "./components/Navbar";
import Login from "./components/Login";

function App() {
  return (
    <Router>
      <Navbar />
      <Routes>
        <Route path="/" element={<Dashboard />} />
        <Route path="/budget" element={<BudgetManager />} />
        <Route path="/expenses" element={<ExpenseTracker />} />
        <Route path="/alerts" element={<Alerts />} />
        <Route path="/loyalty" element={<LoyaltyProgram />} />
        <Route path="/login" element={<Login />} />
      </Routes>
    </Router>
  );
}
export default App;
```

```javascript
// Navbar.js - Navigation Component
import React from "react";
import { Link } from "react-router-dom";

const Navbar = () => {
  return (
    <nav>
      <ul>
        <li><Link to="/">Dashboard</Link></li>
        <li><Link to="/budget">Budget</Link></li>
        <li><Link to="/expenses">Expenses</Link></li>
        <li><Link to="/alerts">Alerts</Link></li>
        <li><Link to="/loyalty">Loyalty</Link></li>
        <li><Link to="/login">Login</Link></li>
      </ul>
    </nav>
  );
};
export default Navbar;

// Dashboard.js - Home Component
import React from "react";

const Dashboard = () => {
  return (
    <div>
      <h2>Welcome to Elvira Finance Tracker</h2>
      <p>Manage your finances effectively within the supermarket ecosystem.</p>
    </div>
  );
};
export default Dashboard;

// BudgetManager.js - Budgeting Component
import React, { useState } from "react";

const BudgetManager = () => {
```

```jsx
  const [budget, setBudget] = useState(0);
  return (
    <div>
      <h2>Budget Manager</h2>
      <input type="number" value={budget} onChange={(e) =>
setBudget(e.target.value)} />
      <p>Your budget: {budget}</p>
    </div>
  );
};
export default BudgetManager;

// ExpenseTracker.js - Expense Tracking Component
import React, { useState } from "react";

const ExpenseTracker = () => {
  const [expenses, setExpenses] = useState([]);
  const addExpense = (e) => {
    e.preventDefault();
    const newExpense = { id: expenses.length + 1, name: e.target.name.value,
amount: e.target.amount.value };
    setExpenses([...expenses, newExpense]);
  };
  return (
    <div>
      <h2>Expense Tracker</h2>
      <form onSubmit={addExpense}>
        <input type="text" name="name" placeholder="Expense Name" required />
        <input type="number" name="amount" placeholder="Amount" required />
        <button type="submit">Add Expense</button>
      </form>
      <ul>
        {expenses.map((exp) => (
          <li key={exp.id}>{exp.name} - ${exp.amount}</li>
        ))}
      </ul>
    </div>
```

```jsx
  );
};
export default ExpenseTracker;

// Alerts.js - Notifications Component
import React from "react";

const Alerts = () => {
  return (
    <div>
      <h2>Alerts & Notifications</h2>
      <p>Stay informed about your spending habits and supermarket
promotions.</p>
    </div>
  );
};
export default Alerts;

// LoyaltyProgram.js - Loyalty Features Component
import React from "react";

const LoyaltyProgram = () => {
  return (
    <div>
      <h2>Loyalty Program</h2>
      <p>Earn rewards and discounts for smart financial management.</p>
    </div>
  );
};
export default LoyaltyProgram;

// Login.js - Authentication Component
import React, { useState } from "react";

const Login = () => {
  const [username, setUsername] = useState("");
  const [password, setPassword] = useState("");
```

```
  const handleLogin = (e) => {
   e.preventDefault();
   alert(`Welcome, ${username}!`);
  };
  return (
   <div>
    <h2>Login</h2>
    <form onSubmit={handleLogin}>
     <input type="text" placeholder="Username" onChange={(e) =>
setUsername(e.target.value)} required />
     <input type="password" placeholder="Password" onChange={(e) =>
setPassword(e.target.value)} required />
     <button type="submit">Login</button>
    </form>
   </div>
  );
};
export default Login;
```

import React from "react";
import { Sidebar } from "./Sidebar";
import { Card, CardContent } from "@/components/ui/card";
import { BarChart, Bar, XAxis, YAxis, Tooltip, ResponsiveContainer } from
"recharts";
import { Button } from "@/components/ui/button";
import { Bell, DollarSign, ShoppingCart } from "lucide-react";

const data = [
 { name: "Jan", spending: 400 },
 { name: "Feb", spending: 350 },
 { name: "Mar", spending: 500 },
 { name: "Apr", spending: 450 },
 { name: "May", spending: 600 },
];

```jsx
const Dashboard = () => {
 return (
   <div className="flex h-screen bg-gray-100">
    <Sidebar />
    <div className="flex-1 p-6">
     <h1 className="text-2xl font-bold mb-4">Dashboard</h1>
     <div className="grid grid-cols-1 md:grid-cols-3 gap-4 mb-6">
      <Card>
       <CardContent className="flex items-center p-4">
        <DollarSign className="w-10 h-10 text-green-500 mr-4" />
        <div>
         <h2 className="text-lg font-semibold">Total Spending</h2>
         <p className="text-gray-600">₦120,000</p>
        </div>
       </CardContent>
      </Card>
      <Card>
       <CardContent className="flex items-center p-4">
        <ShoppingCart className="w-10 h-10 text-blue-500 mr-4" />
        <div>
         <h2 className="text-lg font-semibold">Recent Purchases</h2>
         <p className="text-gray-600">23 Transactions</p>
        </div>
       </CardContent>
      </Card>
      <Card>
       <CardContent className="flex items-center p-4">
        <Bell className="w-10 h-10 text-red-500 mr-4" />
        <div>
         <h2 className="text-lg font-semibold">Alerts</h2>
         <p className="text-gray-600">3 Notifications</p>
        </div>
       </CardContent>
      </Card>
     </div>
     <div className="bg-white p-6 rounded-lg shadow-md">
      <h2 className="text-lg font-bold mb-4">Spending Overview</h2>
```

```jsx
        <ResponsiveContainer width="100%" height={300}>
          <BarChart data={data}>
            <XAxis dataKey="name" />
            <YAxis />
            <Tooltip />
            <Bar dataKey="spending" fill="#3182ce" />
          </BarChart>
        </ResponsiveContainer>
      </div>
      <div className="mt-6 flex justify-end">
        <Button className="bg-blue-600 text-white">View Full Report</Button>
      </div>
    </div>
  </div>
  );
};

export default Dashboard;
```