Table of Contents

TEST STRATEGY DOCUMENT

1. Test Objectives:

- Ensure the system meets functional requirements by testing core features like shopping list creation, price comparison, and route optimization.

- Identify the potential security threats that our application can face especially with user information and mitigate these security risks.

- Ensure that all features of the app function as intended without any critical defects.

2. Timelines:

- Test planning and preparation: 1 weeks

- Test execution: 4 days

- Reporting: 1 week

3. Lifecycle of Tasks:

- Planning and preparation

- Test case design and development

- Test environment setup

- Test execution

- Defect reporting and tracking

4. Test Approach:

- We will implement a combination of manual and automated testing

- Focus on testing high-priority areas first

- Incorporate user feedback into the testing approach

- Testing individual units

- Verify all functional requirements are satisfied

- Verify the accuracy of the data when comparing prices and optimizing routes

- Identify and fix any security flaws

5. Testing Types:

- **Unit Testing:** For every increment that is made during a sprint.

- **Integration Testing:** Ensuring that all components interact efficiently with each other.

- **System Testing:** Testing a complete integrated system as a whole.

- **Security Testing:** To ensure that the user data is safe.

- **User Acceptance Testing (UAT):** Ensuring the system meets user expectations and is user friendly.

7. Testing Tools:

- Postman

- Selenium

- Built in MongoDB testing tools

- React testing libraries such as Jest, Enzyme

7. Hardware-Software Configuration:

Hardware:

- iOS and Android mobile devices, and desktop.

Software:

- **Frontend:** React.js

- **Backend:** Node.js

- **Database:** MongoDB

- **Optimization Engine:** Python-based algorithms

- **APIs:** Google Maps API, supermarket APIs

8. Reporting

- Daily progress reports during test execution

- Weekly test summary reports

- Test completion report summarizing overall testing results and recommendations for future testing