# Test Plan

## Tools to be used

1. Trello for bug tracking and project management.
2. Jest for unit testing.

## Test Approaches

### Functional, Non-functional, Usability, Performance, Security Testing

1. Functional Testing: Validate the system against the functional requirements.
2. Non-functional Testing: Includes performance, usability, and security testing.
3. Usability Testing: Ensure the application is user-friendly.
4. Performance Testing: Assess the system's performance under various conditions.
5. Security Testing: Identify vulnerabilities and ensure data protection.

### Automation Testing Approaches

1. Jest: Automated unit testing in JavaScript/TypeScript.

### Unit Testing, System Testing, Integration Testing, Acceptance Testing

2. Unit Testing: Individual components tested for correctness.
3. System Testing: Testing the complete and integrated software.
4. Integration Testing: Verifying interactions between different modules.
5. Acceptance Testing: Ensuring the system meets business requirements.

## Schedule and Timeframe

The testing phase is scheduled to run from August 21, 2024, to August 26, 2024. Daily stand-ups and weekly reviews will be conducted.

## Staffing

1. Test Lead: Responsible for managing the testing process.

2. Testers: Responsible for executing test cases and reporting bugs.

3. Automation testers: Develop and maintain automated test scripts.

# Strategies for Testing

## Manual Testing vs. Automation Testing

1. Manual Testing: Used for exploratory and usability testing.

2. Automation Testing: Applied to repetitive tasks.

## Areas to Test

1. Critical functionalities such as login, search processing, and data integrity.

2. Performance under peak load conditions.

3. Security against unauthorized access.

## Test Environments

1. Development Environment: Initial tests conducted during development.

2. Staging Environment: Final validation before release.

3. Production Environment: Post-deployment monitoring and testing.