Test Strategy for ConnectED (Social networking web application)

1. **Introduction:**

The test strategy for [Project Name] defines the overall approach for ensuring the quality of the software through systematic testing activities.

1. **Scope:**

The scope of testing includes functional, non-functional, regression, integration, and acceptance testing across different environments.

1. **Testing Approach:**

* **Agile Testing:** Testing activities will be aligned with Agile development methodologies, with testing integrated into each sprint.
* **Risk-based Testing:** Prioritizing testing efforts based on the impact and likelihood of identified risks.
* **Automation:** Utilizing automation tools and frameworks to increase test coverage and efficiency.
* **Continuous Integration/Continuous Deployment (CI/CD):** Implementing automated testing in CI/CD pipelines to ensure rapid feedback on code changes.
* **Exploratory Testing:** Supplementing scripted testing with exploratory testing to uncover defects not captured by predefined test cases.

1. **Test Levels:**

* **Unit Testing:** Conducted by developers to validate individual units of code.
* **Integration Testing:** Ensuring that integrated components/modules function correctly together.
* **System Testing**: Validating end-to-end functionality of the entire system.
* **User Acceptance Testing (UAT):** Conducted by end-users to validate that the software meets business requirements.

1. **Test Types:**

* **Functional Testing:** Validating functional requirements against expected behavior.
* **Non-Functional Testing:** Assessing performance, security, usability, and other non-functional aspects of the software.
* **Regression Testing:** Ensuring that new changes do not introduce unintended side effects.
* **Compatibility Testing:** Verifying compatibility across different browsers, devices, and operating systems.

1. **Defect Management:**

* Defects will be logged, tracked, and managed using Jira.
* Defects will be categorized based on severity and priority for efficient resolution.

1. **Reporting and Metrics:**

* Test execution progress and results will be tracked and reported using Jira dashboards and reports.
* Metrics such as test coverage, defect density, and defect aging will be monitored to assess testing effectiveness.

1. **Test Environment:**

* Multiple test environments will be set up to support various testing activities, including development, staging, and production-like environments.

1. **Risks and Contingencies:**

* Identified risks will be documented, and mitigation strategies will be developed to address them.

10. **Roles and Responsibilities:**

* Clear roles and responsibilities will be defined for testers, developers, product owners, and other stakeholders involved in testing.

11. **Review and Approval:**

* This test strategy requires review and approval from stakeholders before implementation.