**Outline the overall testing strategy and objectives. Define the types of tests to be conducted: functional, non-functional, integration, security, etc.**

Overall Testing Strategy:

1. **Objective:**

Ensuring the grant application system is robust, functional, secure, and meets stakeholder requirements.

2**. Types of Tests:**

**Functional Testing:**

- Verify that each function of the application operates in accordance with requirements.

- Test user interactions, workflows, and expected outputs against specifications.

**Non-functional Testing:**

**Performance Testing:**

- Measure system response times, throughput, and resource utilization under various loads.

**Usability Testing:**

- Assess the application's ease of use and user-friendliness.

**Reliability Testing:**

- Ensure the system performs consistently and reliably under different conditions.

**Compatibility Testing:**

- Validate the system's compatibility with different devices, browsers, and environments.

**Integration Testing:**

- Validate the interaction between different components/modules of the system.

- Ensure seamless data flow and functionality across integrated parts.

**Security Testing:**

**Vulnerability Assessment:**

- Identify and mitigate vulnerabilities that could compromise system security.

**Penetration Testing:**

- Simulate attacks to identify potential weaknesses in the system's defences.

**Authentication & Authorization Testing:**

- Verify the effectiveness of access control mechanisms and user authentication.

**Objectives:**

1. **Functional Testing Objectives:**

- Validate that all features and functionalities work as intended.

- Ensure user interactions align with expected behaviour and requirements.

2. **Non-functional Testing Objectives:**

**Performance:**

- Determine system performance under various loads to ensure responsiveness and scalability.

**Usability:**

- Assess the user experience and interface intuitiveness.

**Reliability:**

- Validate system stability and its ability to function consistently.

**Compatibility:**

- Ensure the application works across different platforms and environments.

3**. Integration Testing Objectives:**

- Ensure different modules/components of the system work seamlessly together.

- Validate data flow and interactions between integrated parts.

4**. Security Testing Objectives:**

**Vulnerability Assessment:**

- Identify and mitigate potential security vulnerabilities.

**Penetration Testing:**

- Test the system's resistance to external attacks.

**Authentication & Authorization Testing:**

- Verify the effectiveness of access control mechanisms.

**// Feature Testing, Regression Testing, Smoke and Sanity Testing**