**Scenario: Google Search Engine**

**Task 2 – Estimation Description: Please provide rough estimate with WBS for test activities planned for the scenario mentioned. Provide information about what you suggest to include and what the customer gets as a result of planned activities.**

**Work Breakdown Structure (WBS) and Estimation for Google Search Engine Testing**

**Introduction**

In this section, we will provide a rough estimate with a Work Breakdown Structure (WBS) for the test activities planned for the Google Search Engine scenario. We will outline the major tasks, provide time estimates, and detail what the customer can expect as a result of these activities.

**Assumptions**

Before providing the estimates, let's outline the assumptions made for planning and estimation:

**1. Team Size**: A dedicated testing team with skilled testers is available.

**2. Access to Resources:** Necessary hardware, software, and test environments are readily accessible.

**3. Availability of Test Data**: Relevant test data, including sample search queries and documents, is available.

**4. Staging Environment:** A staging environment closely mimics production for thorough testing.

**5. Production Testing**: Limited testing in the production environment is possible without causing significant disruptions.

**6. Tools and Automation:** Test automation tools are available for efficiency.

**7. Defect Management:** A well-defined defect tracking system is in place.

**8. Documentation:** Proper documentation of test cases and results is maintained.

**Work Breakdown Structure (WBS) and Estimation**

**1. Test Planning (Duration: 2 weeks)**

- Define testing objectives and scope.

- Identify test requirements.

- Develop the testing strategy and approach.

- Create a detailed test plan.

**Customer Outcome:** A comprehensive test plan outlining the testing strategy and objectives.

**2. Test Environment Setup (Duration: 1 week)**

- Set up the development, staging, and production testing environments.

- Ensure the environments closely mimic production.

**Customer Outcome:** Ready-to-use test environments for thorough testing.

**3. Test Case Design (Duration: 3 weeks)**

- Identify test scenarios and cases for functional, performance, security, compatibility, and usability testing.

- Create detailed test scripts for automated testing (where applicable).

**Customer Outcome:** Detailed test cases and scripts for various testing types.

**4. Test Data Preparation (Duration: 2 weeks)**

- Gather and prepare test data, including sample search queries and documents.

- Ensure data is representative of real-world scenarios.

**Customer Outcome**: Ready-to-use test data sets for functional and performance testing.

**5. Test Execution (Duration: 4 weeks)**

- Execute test cases as per the defined test plan.

- Conduct functional, performance, security, compatibility, and usability testing.

- Monitor and report test progress.

**Customer Outcome**: Regular test execution reports with detailed findings and test results.

**6. Defect Management (Ongoing)**

- Report and track defects using a standardized defect tracking system.

- Prioritize and resolve defects in collaboration with the development team.

**Customer Outcome:** Transparent defect reporting and resolution process.

**7. User Acceptance Testing (UAT) (Duration: 2 weeks)**

- Involve real users to perform UAT.

- Gather user feedback and make necessary improvements.

**Customer Outcome:** Improved user experience based on user feedback.

**8. Test Closure (Duration: 1 week)**

- Complete test execution and finalize test reports.

- Summarize lessons learned and areas for improvement.

**Customer Outcome:** Test closure report and recommendations for future testing.

**Quality Expectations**

The level of quality expected as a result of the proposed activities includes:

**1. Functionality:** Ensuring that Google Search Engine functions correctly with minimal to no defects affecting core search features.

**2. Performance:** Verifying that the search engine provides fast and reliable results under various load conditions.

**3. Security:** Identifying vulnerabilities and implementing measures to protect user data and ensure a secure search experience.

**4. Compatibility:** Ensuring the search engine works seamlessly across a variety of browsers and devices.

**5. Usability:** Assessing the user interface and overall user experience to improve user satisfaction.

**6. Defect Management:** Transparent tracking and resolution of defects to maintain search quality.

**7. User Acceptance:** Incorporating user feedback to enhance the search engine's user experience.

**8. Documentation:** Maintaining detailed documentation for future reference and improvement.

**Conclusion**

This WBS and estimation provide a rough outline of the major testing activities, their durations, and the quality expectations for testing the Google Search Engine. The customer can expect a thoroughly tested, secure, and user-friendly search engine as a result of these activities.