Software Requirements Specification: Chatbot Testing Proof of Concept

# 0. User Requirement Analysis

**Raw Text Dump:** (See original prompt you provided in your question; I won't repeat it here).

**Key Requirement Extraction:**

* **Core Functions:** Design and execute comprehensive test cases for AI-powered, rule-based, and hybrid chatbots to identify errors and evaluate response accuracy.
* **User Expectations:** Testers require both chatbot testing expertise and adaptability to handle various chatbot architectures. System prioritizes accuracy and reliability of testing results.

**Assumptions:**

* Testers will have access to client-provided guidelines and evaluation rubrics.
* This PoC focuses on the testing process itself, not the development of a new testing platform.

**Open Questions:**

* Specific performance metrics that define "accurate" responses?
* Are there examples of previous chatbot projects requiring testing, to better understand complexity?

# 1. Introduction

* **Purpose:** The PoC will validate our company's ability to provide high-quality chatbot testing services, emphasizing our accuracy and adaptability in evaluating varied chatbot technologies.
* **Scope:** The PoC involves designing test cases for a defined set of chatbots (to be provided by the client), executing the tests, and documenting the results according to industry standards.
* **Definitions, Acronyms, Abbreviations:**
  + AI: Artificial Intelligence
  + NLU: Natural Language Understanding
  + PoC: Proof of Concept
* **References:** Client-provided testing guidelines (if available)
* **Overview:** Outline of remaining key SRS sections

# 2. Overall Description

* **PoC Context:** This PoC is a potential first step in a broader engagement for comprehensive chatbot testing services.
* **Key PoC Functions:**
  + Test case design covering common, edge-case, and stress scenarios.
  + Error identification and classification (response relevance, NLU failures, etc.).
  + Result reporting with clear pass/fail criteria influenced by client guidelines.
* **User Characteristics:** Testing team members with prior chatbot testing experience.
* **Constraints:** Limited PoC timeframe, potentially restricted access to full chatbot implementations.
* **Assumptions/Dependencies:** Client will provide sample chatbots, with access to developers if needed for clarifying questions.

# 3. Specific Requirements (PoC-Centered)

## Functional Requirements:

* **Test Case Development:**
  + Input: Test cases will align to chatbot type (rule-based, AI-powered, etc.)
  + Process: Create both standard and custom scenarios based on client priorities.
  + Output: Tests document expected input/output pairs, edge-cases, and stress tests.
* **Test Execution:**
  + Input: Live access to provided sample chatbots.
  + Process: Testers manually interact and/or use automated tools if appropriate.
  + Output: Test execution results logged systematically.
* **Result Reporting:**
  + Input: Data on pass/fail test cases, error types, response analysis.
  + Process: Report with clear metrics defined in collaboration with the client.
  + Output: Summarized analysis and potential improvement recommendations.

## Design Patterns:

* **Prototype:** Initial tests could be done on simplified bots (Wizard-of-Oz style) to quickly gather early feedback on test scenarios.
* **Facade:** For AI chatbots, the PoC could focus on black-box testing, emphasizing input/output analysis in absence of full access to the underlying model.

## Success Criteria:

* Test cases achieve a [Defined threshold]% coverage of identified potential functionality or failure points.
* Reporting effectively communicates results in a way client can easily understand.

## Design Constraints:

* Focus on rapid test case development, favoring clear documentation over tool sophistication.

## Non-Functional Requirements:

* **Basic Security:** All test data, especially anything client-sensitive, will be handled according to provided data security guidelines.

# 4. Other Requirements

* **PoC Testing Documentation:** A brief outline of the test cases executed and the reporting processes for clarity and replicability.

**Design Pattern Considerations**

(See "Design Patterns" under Specific Requirements for explanation)

Let me know if you'd like any specific sections refined or additional explanations!