**Project Name:** AI-Powered Multiple Choice Quiz Generator

# 0. User Requirement Analysis

**Raw Text Dump:** (As you've already provided this)

**Key Requirement Extraction:**

* **Core Functions:**
  + Generate multiple-choice quizzes from provided text input.
  + Utilize NLP techniques to ensure accurate question creation.
  + Provide a user-friendly interface for interacting with the system.
  + Track and store quiz questions and results in a database
  + Calculate success metrics (accuracy, completion rate, etc.)
* **User Expectations:**
  + Ease of use.
  + High-quality, relevant quiz questions.
  + Administrative control for managing users and content.
  + Ability to track progress with performance metrics.

**Assumptions:**

* The provided sample text input reflects the intended complexity and subject matter.
* Basic web development skills may be needed for the PoC if a simple UI is required.

**Open Questions:**

* What specific NLP techniques are preferred? (e.g., knowledge graph, sentiment analysis, etc.)
* Clarify the desired depth of the quiz question repository and how it might be used in the full system.
* Define specific metrics to track quiz/user performance.

# 1. Introduction

* **Purpose:** This PoC aims to validate the feasibility of using GPT or LLAMA models to develop an accurate and user-friendly multiple-choice quiz generator.
* **Scope:** The PoC will focus on core quiz generation functionality, simplified UI elements, and basic quiz result tracking to measure accuracy and performance.
* **Definitions, Acronyms, Abbreviations:**
  + NLP - Natural Language Processing
  + GPT - Generative Pre-trained Transformer
  + LLAMA - Large Language Model Meta AI
  + UI – User Interface
  + PoC – Proof of Concept
* **References:** Client provided text dump, documentation on GPT/LLAMA (if specified).
* **Overview:** The remaining SRS sections detail the PoC context, functionality, success criteria, and potential design pattern applications.

# 2. Overall Description

* **PoC Context:** This PoC is a critical early step in demonstrating the potential of AI-powered quiz generation for [describe how it fits into the broader project goal].
* **Key PoC Functions:**
  + Generation of multiple-choice quizzes from text input.
  + Implementation of NLP technique (to be decided) to improve question quality.
  + Mockup or simplified UI for testing.
  + Basic database for question storage and performance metric calculation.
* **User Characteristics:** The primary PoC user will be the client or stakeholders for evaluation purposes.
* **Constraints:** Timeboxed development (e.g., 2 weeks), emphasis on rapid prototyping, simplified functionality.
* **Assumptions/Dependencies:** Availability of suitable GPT or LLAMA models (if not developing one from scratch).

# 3. Specific Requirements (PoC-Centered)

**Functional Requirements:**

* **Input:** Accept text input (copy/paste, file upload, etc.).
* **Quiz Generation:**
  + Process text to identify key concepts for question creation
  + Utilize selected NLP technique for improved question quality
  + Generate at least 4-5 multiple-choice questions (with one correct answer and several plausible distractors)
* **UI (Simplified):**
  + Text box/area for input.
  + Question display (one at a time).
  + Multiple-choice selection.
* **Result Tracking:**
  + Basic database to store questions and user answers.
  + Simple calculation of accuracy (correct vs. incorrect)

**Success Criteria:**

* Generation of relevant multiple-choice questions that adequately assess comprehension of the input text.
* Measurable accuracy in question generation using the chosen NLP technique.
* Feedback from the client on the user interface and overall concept.

**Design Constraints**

* Development will prioritize efficiency and rapid prototyping.
* UI may use placeholder elements.

**Non-Functional Requirements (Simplified)**

* **Performance:** Questions should be generated within a reasonable time frame (e.g., under 30 seconds in the PoC).

Let me know if you'd like to continue with Section 4 and elaborate on Design Pattern Considerations!