Software Requirements Specification for Software Engineering: subtitle describing software

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Contents

Revision History

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

1 Purpose of the Project

1.1 User Business

Insert your content here.

1.2 Goals of the Project

Insert your content here.

2 Stakeholders

2.1 Client

Insert your content here.

2.2 Customer

Insert your content here.

2.3 Other Stakeholders

Insert your content here.

2.4 Hands-On Users of the Project

Insert your content here.

2.5 Personas

Insert your content here.

2.6 Priorities Assigned to Users

Insert your content here.

2.7 User Participation

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2.8 Maintenance Users and Service Technicians

Insert your content here.

3 Mandated Constraints

3.1 Solution Constraints

Insert your content here.

3.2 Implementation Environment of the Current System

Insert your content here.

3.3 Partner or Collaborative Applications

Insert your content here.

3.4 Off-the-Shelf Software

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3.8 Enterprise Constraints

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4 Naming Conventions and Terminology

4.1 Glossary of All Terms, Including Acronyms, Used by Stakeholders involved in the Project

Insert your content here.

5 Relevant Facts And Assumptions

5.1 Relevant Facts

Insert your content here.

5.2 Business Rules

Insert your content here.

5.3 Assumptions

Insert your content here.

6 The Scope of the Work

6.1 The Current Situation

Insert your content here.

6.2 The Context of the Work

Insert your content here.

6.3 Work Partitioning

Insert your content here.

6.4 Specifying a Business Use Case (BUC)

Insert your content here.

7 Business Data Model and Data Dictionary

7.1 Business Data Model

Insert your content here.

7.2 Data Dictionary

Insert your content here.

8 The Scope of the Product

8.1 Product Boundary

Insert your content here.

8.2 Product Use Case Table

Insert your content here.

8.3 Individual Product Use Cases (PUC's)

Insert your content here.

9 Functional Requirements

9.1 Authentication

A1: Description.
Insert formal Specification

Rationale: Insert Rational
Fit criterion: Insert criterion here

9.2 System Setup

SS1: Description.
Insert formal Specification
Rationale: Insert Rational
Fit criterion: Insert criterion here

9.3 User Interactions and Question Handling

UIQH1: Description.
Insert formal Specification
Rationale: Insert Rational
Fit criterion: Insert criterion here

9.4 Data Collection and Storage

DCS1: The database shall store multimedia files including video, audio, and JSON format files for each session.
Insert formal Specification
Rationale: These file types are necessary to capture the full scope of the speech-language assessment, including patient responses and the structured data associated with each session (e.g., flagged occurrences, timestamps).
Fit criterion: The system must successfully store and retrieve at least 1GB of video, audio, and JSON data per session without data corruption.

DCS2: The database shall record the video, audio, flagged occurrences (e.g., errors or critical moments during the assessment), and timestamps for each question asked during the assessment.
Insert formal Specification
Rationale: Storing flagged occurrences and timestamps lets clinicians perform detailed analysis of patient responses and enables them to review specific moments of interest efficiently.
Fit criterion: The database shall include video and audio files for 100 percent of assessment sessions, and each recording must have flagged occurrences and timestamps associated with every question asked, retrievable via

query.

DSC3: The system shall not store any personally identifiable textual information (e.g., patient name, address, or medical record number) in the database.
Insert formal Specification
Rationale: To maintain privacy and ensure compliance with data protection regulations such as HIPAA, identifying textual information must be excluded from storage in the database.
Fit criterion: ??.

DSC4: The database shall group all stored data by a unique user identifier to ensure data can be linked to specific users without storing identifiable information.
Insert formal Specification
Rationale: Using a unique user identifier allows for data organization and retrieval by patient without compromising patient privacy, supporting the requirement for anonymized data storage.
Fit criterion: The system must assign a unique identifier to every user and confirm through testing that all session data is properly grouped and retrievable under that identifier, with no misassociated data.

DSC5: Description.
Insert formal Specification
Rationale: Insert Rational
Fit criterion: Insert criterion here

9.5 Video and Audio Data Analysis

VADA1: Description.
Insert formal Specification
Rationale: Insert Rational
Fit criterion: Insert criterion here

VADA2: The analysis model shall have access to the video recordings of each session for the purpose of processing and analyzing patient speech patterns and behavior.

Insert formal Specification
Rationale: The video data contains essential visual and auditory information that the model needs to analyze in order to assess speech-related disturbances and non-verbal cues.
Fit criterion: Insert criterion here

9.6 Data Processing and Display

DPD1: Description.
Insert formal Specification
Rationale: Insert Rational
Fit criterion: Insert criterion here

10 Look and Feel Requirements

10.1 Appearance Requirements

Insert your content here.

10.2 Style Requirements

Insert your content here.

11 Usability and Humanity Requirements

11.1 Ease of Use Requirements

Insert your content here.

11.2 Personalization and Internationalization Requirements

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11.3 Learning Requirements

Insert your content here.

11.4 Understandability and Politeness Requirements

Insert your content here.

11.5 Accessibility Requirements

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12 Performance Requirements

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Insert your content here.

12.2 Safety-Critical Requirements

Insert your content here.

12.3 Precision or Accuracy Requirements

Insert your content here.

12.4 Robustness or Fault-Tolerance Requirements

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12.5 Capacity Requirements

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12.6 Scalability or Extensibility Requirements

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13.1 Expected Physical Environment

Insert your content here.

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Insert your content here.

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14 Maintainability and Support Requirements

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Insert your content here.

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16.1 Cultural Requirements

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17.1 Legal Requirements

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20.1 Effects on the Current Environment

Insert your content here.

20.2 Effects on the Installed Systems

Insert your content here.

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Insert your content here.

20.4 Limitations in the Anticipated Implementation Environment That May Inhibit the New Product

Insert your content here.

20.5 Follow-Up Problems

Insert your content here.

21 Tasks

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Insert your content here.

21.2 Planning of the Development Phases

Insert your content here.

22 Migration to the New Product

22.1 Requirements for Migration to the New Product

Insert your content here.

22.2 Data That Has to be Modified or Translated for the New System

Insert your content here.

23 Costs

Insert your content here.

24 User Documentation and Training

24.1 User Documentation Requirements

Insert your content here.

24.2 Training Requirements

Insert your content here.

25 Waiting Room

Insert your content here.

26 Ideas for Solution

Insert your content here.

Appendix — Reflection

The information in this section will be used to evaluate the team members on the graduate attribute of Lifelong Learning. Please answer the following questions:

1. What knowledge and skills will the team collectively need to acquire to successfully complete this capstone project? Examples of possible knowledge to acquire include domain specific knowledge from the domain of your application, or software engineering knowledge, mechatronics knowledge or computer science knowledge. Skills may be related to technology, or writing, or presentation, or team management, etc. You should look to identify at least one item for each team member.

2. For each of the knowledge areas and skills identified in the previous question, what are at least two approaches to acquiring the knowledge or mastering the skill? Of the identified approaches, which will each team member pursue, and why did they make this choice?