



SEMIA

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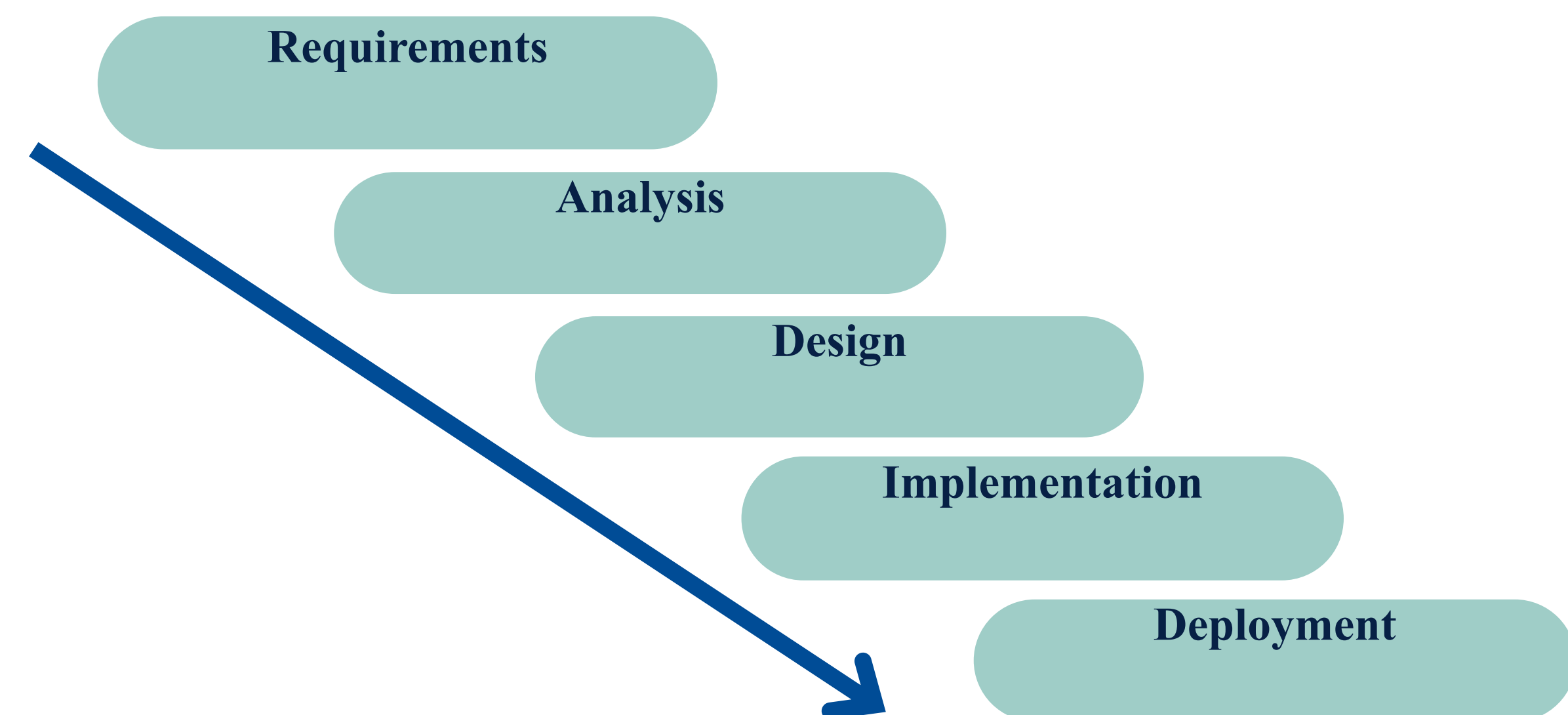
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ABSTRACT

SEMIA is an intelligent mobile application developed to facilitate seamless communication between two primary user groups: deaf or hard-of-hearing individuals and hearing individuals. SEMIA offers a useful and socially significant solution that promotes inclusivity in the workplace, healthcare, education, and daily life while furthering the objectives of Saudi Vision 2030 in terms of social empowerment and digital transformation.

METHODOLOGY



INTRODUCTION

One of the most important components of human interaction is communication, which enables connections, idea sharing, and full social participation. However, for individuals who are deaf or hard of hearing, communication often presents a significant challenge, especially in environments where sign language interpreters are not available. This gap can create barriers in education, healthcare, workplaces, and everyday social interactions.

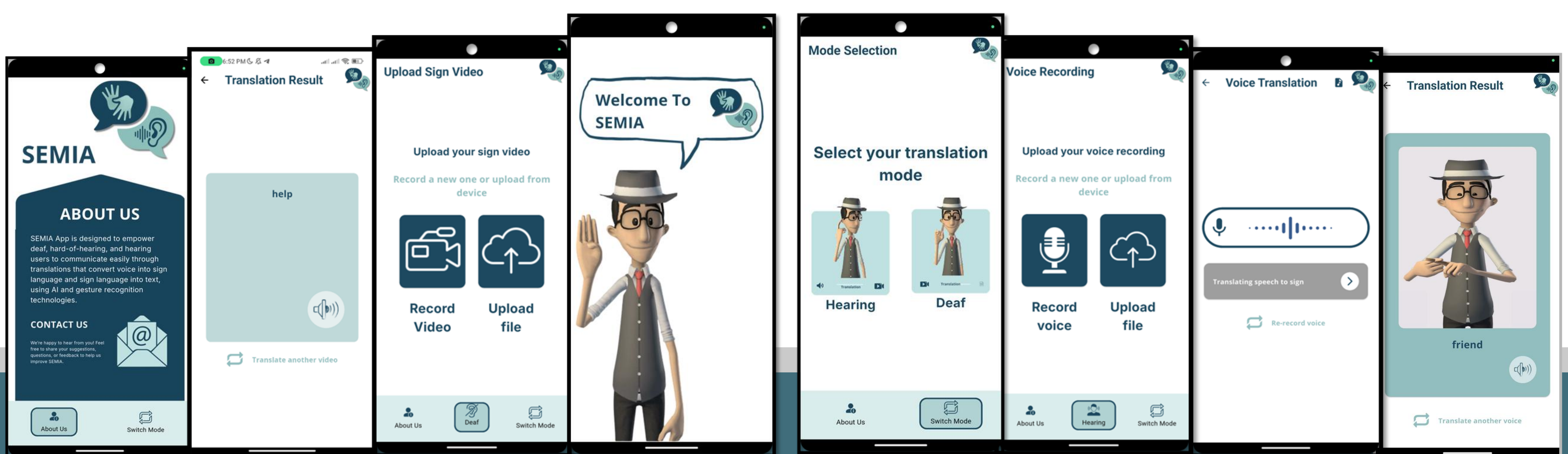
OBJECTIVES

1. **Speak to Sign:** Hear speech, see it translated into sign language by a 3D avatar.
2. **Sign to Speak:** Sign back, and the app converts it to text or speech for seamless two-way conversation.
3. **Easy for Everyone:** A simple, intuitive interface for deaf, hard-of-hearing, and hearing users.

TOOLS



Dart



CONCLUSION & FUTURE WORK

SEMIA enables seamless communication between deaf and hearing users through intelligent sign language translation. Future enhancements include Arabic and Saudi Sign Language support, real-time continuous translation, user history and favorites, offline mode for basic translation, and expanded sentence-level vocabulary.

References



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