Problem Statement and Goals
Software Engineering

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Table 1: Revision History

Date	Developer(s)	Change
September 19, 2023	Andrew Kil	Initial Proposed Draft
September 20, 2023	Jeremy Langner	Edited Problem section and ease of access within Goals
Date2	Name(s)	Description of changes
...	...	...

1 Problem Statement

1.1 Problem

Learning a new language can be an arduous task, one that only gets harder as people grow older in life. Time becomes a more scarce resource as individuals may find it difficult to make the effort to learn. ASLingo aims to ease that burden by providing an online, easy-to-access web application that allows individuals to test their understanding as well as learn new signs at their own pace in a fun, interactive manner. Learning a new language requires consistent efforts and constant feedback to better understanding and improved memory of the language. This application will be able to provide live feedback as the user learns and attempts new signs to ensure the user is on track to complete their goal.

1.2 Inputs and Outputs

The input of ASLingo or the system should be the user's hand gestures which can be referred to as signs, at which point the system should be able to determine whether the system is correct or incorrect. The flow from input to output should work as follows:

- The user would attempt to form the sign of what the system prompted them to do

- The system would process and determine whether or not the user formed the correct sign

- The system would output an according response based on whether or not the user was correct

1.3 Stakeholders

The stakeholders for this project would include the hard of hearing community as well as individuals who wish to learn ASL. This would naturally expand outward towards educators who wish to promote the learning of ASL to their respective institutions.

1.4 Environment

The software of ASLingo is a computer web-browser with live translation capabilities. The software can identify hand signs from a live video feed.

2 Goals

Ease Of Access:
Individuals with a computer than can access Internet should be able to use ASLingo anytime, anywhere. The user's ability to access the system should not be inhibited by anything within the design.

Accessibility:
The system should be simple and intuitive to use with little to none required thought from the user to begin the training. Anyone of learning age should be able to utilize ASLingo to learn a few hand signs.

Engaging
A crucial part of the learning experience is keeping the student's attention. ASLingo should be engaging, and thereby fun, enough such that the user is willing to engage with the system independent of external influences.

User Customize Experience
A user should be able to focus their learning experience if they wish to learn

specific phrases rather than just general signing. The option to specialize what they learn should prove to enrich their experience while using the software.

3 Stretch Goals

Mobile Port:
Eventually port the web application to a phone application to increase ease-of-access and usability. Having a dedicated mobile experience would naturally improve the Ease of Access and accessibility as accessing web services on mobile is notorious for poor user-end experience.

Expansion to Other Sign Languages
ASL is not the only sign language in the world, and since sign language has yet to universally standardized, the integration of different types of sign languages unique to their country of origin would allow for ASLingo to be taken worldwide.