

Product Requirements

Team

<Ujku i Debores, Joel Bitri>

Brief problem statement

The Morse code translator aims to address the need for a software solution that can efficiently convert Morse code messages into readable text and vice versa. By providing an intuitive and user-friendly interface, the translator will enable users to easily communicate and interpret Morse code messages, eliminating the need for manual decoding and encoding. The software will improve the efficiency and accuracy of Morse code communication, catering to both beginners and experienced users in various domains such as telecommunications, amateur radio, and cryptography.

System requirements

1. The Morse code translator system should support the conversion of Morse code messages to text and vice versa.
2. The system should provide a user-friendly interface for inputting Morse code messages and displaying the corresponding translated text.
3. It should support the Morse code encoding and decoding standards, including the mapping of Morse code characters to their respective alphanumeric equivalents.
4. It should be able to handle a wide range of Morse code message lengths and complexity.
5. The system should be implemented using the Python programming language, utilizing appropriate libraries or modules for audio processing, user interface design, and Morse code translation algorithms.

Users profile

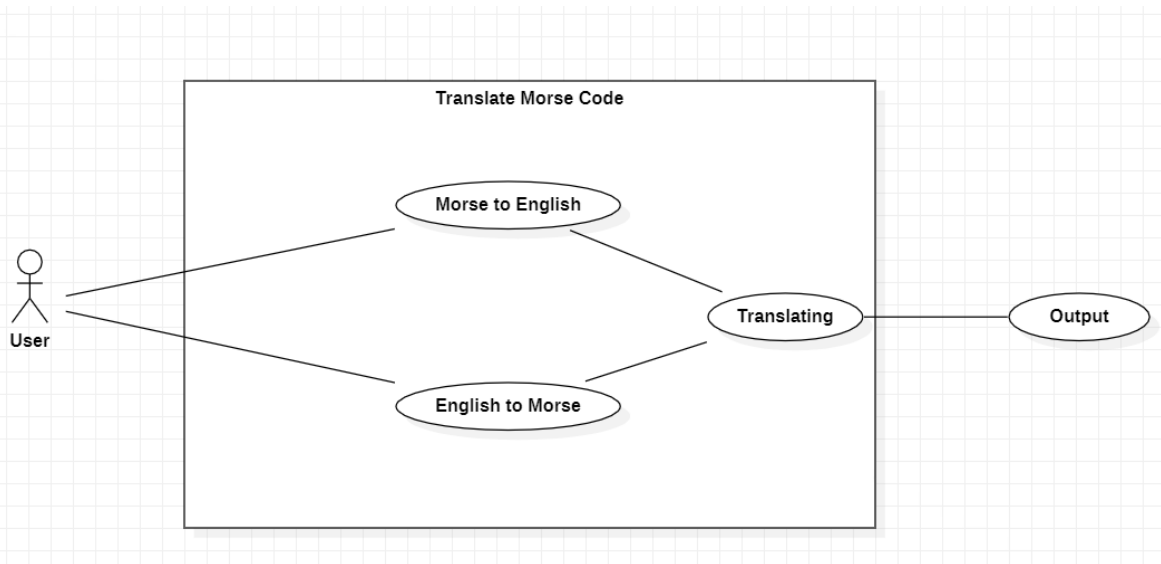
1. Beginner Users: These users have limited or no experience with Morse code and may be less familiar with using computers and software. They require an intuitive and user-friendly interface that guides them through the process of translating Morse code messages.
2. Experienced Users: These users have prior knowledge and experience with Morse code. They are comfortable using computers and software applications. They may require additional advanced features, such as customizable mapping of Morse code characters or the ability to handle complex Morse code signals.
3. Communication Enthusiasts: These users may include amateur radio operators, telecommunication professionals, or individuals interested in Morse code as a means of communication or hobby. They have a good understanding of Morse code and require a reliable and accurate Morse code translator for their communication needs.
4. Researchers and Cryptographers: These users may be involved in academic or professional research, cryptography, or historical studies related to Morse code.

Feature requirements (user stories)

No	User Story Name	Description	Release
1.	Translate Morse Code to Text	As a user, I want to be able to input a Morse code message and have it translated into text, so that I can easily understand the meaning of the Morse code.	R1
2.	Translate Text to Morse Code	As a user, I want to be able to input a text message and have it translated into Morse code, so that I can convert my messages into Morse code for communication.	R1
3.	Play Audio of Morse Code	As a user, I want to be able to play the audio representation of a Morse code message, so that I can listen to the Morse code signals and practice my listening skills.	R1
4.	Share Translated Messages	As a user, I want to be able to share my translated messages through various communication channels (e.g., email, social media), so that I can easily share Morse code messages with others.	R2
5.	Generate Morse Code Sound Signals	As a user, I want to be able to generate Morse code sound signals using an audio output device (e.g., speaker), so that I can transmit Morse code signals in real-time.	R3
6.	Provide Morse Code Learning Resources	As a beginner user, I want the system to provide learning resources and tutorials on Morse code, so that I can learn and improve my understanding and proficiency in Morse code communication.	R3
7.	Support International Morse Code	As a user, I want the system to support International Morse code, so that I can communicate using Morse code in different languages and regions.	R3
8.	Offline Mode	As a user, I want the system to work offline, so that I can use the Morse code translator even without an internet connection.	R3
9.	Dark Mode Support	As a user, I want the system to have a dark mode option, so that I can use the Morse code translator with reduced eye strain in low-light environments.	R3

10.	Cross-Platform Compatibility	As a user, I want the system to be compatible with different operating systems (e.g., Windows, macOS, Linux), so that I can use the Morse code translator on my preferred platform.	R3
-----	------------------------------	---	----

Use case diagram



Use case description

Use Case Number:	<i>UC-01</i>
Use Case Name:	<i>Translate Morse Code</i>
Overview:	<i>This use case describes the process of translating Morse code input into plain text output.</i>
Actor(s):	<i>User</i>
Pre condition(s):	<i>The Morse code translator system is active and ready for user input.</i>
Scenario Flow:	<ol style="list-style-type: none"><i>1. User enters Morse code input.</i><i>2. System validates and processes the Morse code input.</i><i>3. System translates the Morse code into plain text.</i><i>4. System displays the translated plain text to the user.</i>
Post Condition:	<i>The system successfully translates the Morse code input and displays the corresponding plain text output to the user.</i>