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Morse code Learning App

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ABSTRACT: In this paper we have proposed a system that enables people to Learn Morse code and work with android mobile phones. The system utilizes the International Morse Code as a general communication medium. person will be learning Morse code and will giving a test that will acknowledge the person that how much they have learned. This will help the person to write Morse code and give signals in emergency situation. Its value-added services to convert Morse code to English language to vice versa this will be great help for beginners so that a beginner can convert Morse code to English without any difficulties. With help of this app Morse code is easy to understand. Morse encoding communication fits well in a social facilitation context for understanding.

KEYWORDS: Information technology, android, programming, applications, Morse Code.

I. INTRODUCTION

Accompanied by the rapid growth of information technology engineering, android mobiles are now used widely in a variety of fields. Applications of mobile and various software in training, teaching, learning, and computer assisted instruction are a major future trend. However, most applications are designed for normal persons, and are inaccessible to people living with disabilities, unless extra adaptive tools and interfaces were designed for them.

Consequently, a current trend in high technology production is to develop adaptive tools for deaf and blind people to assist them with self-learning and personal development, and lead more independent lives. In this study, Morse code, with an easy to operate single vibration input system, selected as a communication device for people living with disabilities, an easily operated interface provided and an elicit recognition method implemented.

They cannot use the android handset due to physical limitations. Technology means different things to different kind of persons. For some of us, it spells ease and convenient, while for people with disabilities; it is liberating and quite life transforming. It has made them very less dependent on others and has opened up a world of opportunities.

The Morse code is the best choice when it comes to binary communication channel like the vibration mode. Explaining the reason behind use of the Morse coding, Morse code is a fairly sophisticated means of communication; it is still widely used and is also available in number of languages. It is basically dots and dashes, so in the app, a dot is represented by a vibration of short duration while the dash is represented by a vibration of longer duration. So, when a message is received, every letter in the message will be denoted by short or long vibration depending on its Morse code symbol.

II. LITERATURE REVIEW

What is Morse Code?

The telegraphic code used for amateur radio telegraphic communication is the International Morse Code consisting of dot (.) and dashes (-). In Morse Code a dot (.) is made by pressing the telegraph key down and allowing it to spring back up again rapidly; and for making a dash (-), the key is held down for a bit longer period. It is said that a dash (-) unit is three times longer than a dot (.) unit. The Morse Code in fact consists of combinations of aurally distinguishable tones. A tone produced for short duration is a dot tone and a tone three times longer than this tone is a dash tone.

About Morse Code learning app:

Morse Code is still widely recognized, even if it is not as widely used as it once was. Morse code is still popular among amateur radio enthusiasts, although proficiency in Morse Code is no longer a requirement to obtain your amateur radio license. Morse Code is most prevalent in Aviation and Aeronautical fields since radio navigational aids such as VOR's and NDB's still identify in Morse Code. The US Navy and Coast Guard still use signal lamps to communicate via Morse Code. Morse Code has also been used as an alternative form of communication for people with disabilities or whom have their abilities to communicate impaired by stroke, heart attack, or paralysis. There have been several cases where individuals have been able to use their eyelids to communicate in Morse Code by using a series of long and quick blinks to represent that dots and dashes.

What are the Benefits of Morse Code Learning?

Cheap Use of the Morse code is a cheaper way to send information over long distances. For over 150 years since information transmits easily over longer distance via radio waves in an easy and cheap way. Cheap Use of the Morse code is a cheaper way to send information over long distances. For over 150 years since information transmits easily over longer distance via radio waves in an easy and cheap way.

Wireless The lack of wires has made the application of Morse code diverse since it is silently sent and received at any desirable speed. Its wireless nature makes Morse code receivable though any visible means.

It requires less power to transmit. Morse code operates off of a lot less power than voice signal, and as a result, you're able to send your message further distances than you otherwise could.

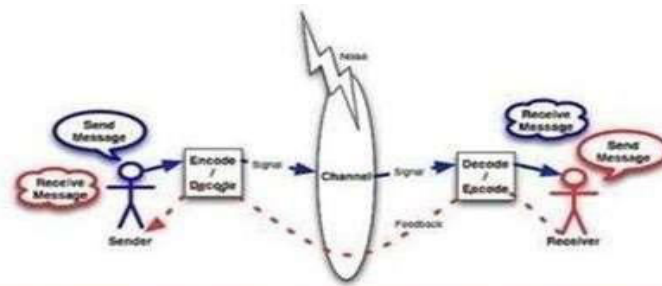
There is a better "read value" to the message. A Morse code message is more easily deciphered when static is present than a voice message. So, even if conditions aren't ideal for radio transmissions, you'll still be able to get your message across relatively clearly.

Morse has better message security. Not a lot of people are willing to sit down and take the time to learn Morse code. One of the things I don't like about the ARRL is that they publicly list your address with your call sign.

You can use it for more than just radio. Blinking lights is another great way in which you can use Morse code to communicate for relatively far distances and silently as well

Use case Diagram

A use case diagram is a description of a series of actions in a sequence. It is represented graphically as an ellipse with a solid line containing simply its name. A use case diagram is a behavioral diagram that depicts the relationship between a group of use cases and actors. It's a link between the use cases and the actors. An actor takes on the role of a real-life object. Sender is the primary actor, and Receiver is the secondary actor.



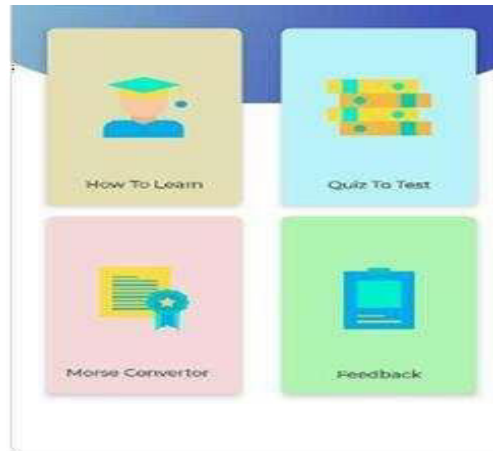
MORSE CODE TRANSMISSION

(Fig.1)

III. PROPOSED SYSTEM

What Are Modules:

A module is a set of source files and build options that allows you to break down your project into discrete functional components. Your project may have one or more modules, and one module may rely on another module. The test data is kept in the data set via the online assessment framework. Instructors can add/remove questions, determine and display the final outcomes for understudies, adjust the test duration, register understudies, erase understudies, present inquiries for understudies at random, and add/remove questions. The suggested system, which the user can access, is classified as MODULES:



(Fig.2)

MODULES:

1. Learn
2. Quiz
3. Morse convertor
4. Feedback

Learning:

This learning module is used to educate people on how they can learn the Morse code language. This also includes the International Morse code slide. The international Morse codes contain 26 letters of the alphabets and some non-English letters that are Arabic numerals as well as some punctuation. In Morse code, there is no difference between the upper- and lower-case letters. The transmission of the Morse Code is measured in dot durations.

QUIZ:

A quiz at the end of a lesson or a unit of work is an entertaining way to find out how much you pupils have learned. It can also inform any further follow up needed. And a quiz is a good way for a you to identify and take ownership of theirknowledge gaps. It's also a great way to help you to plug the gaps to boost their confidence when it comes to formal testing.

MORSE CONVERTER:

The Morse Converter is a module that is used to convert the given statements to Morse Code.

This project also involves the conversion of the Morse Code into relevant Statements. It means both encoding and decoding can be done using this Android app. The international Morse codes contain 26 letters of the alphabets and some non-English letters that are Arabic numerals as well as some punctuation. In Morse code, there is no difference between the upper- and lower-case letters. The transmission of the Morse Code is measured in dot durations.

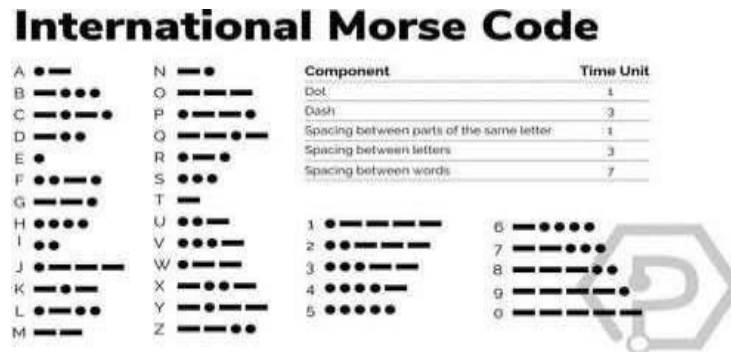
FEEDBACK:

In-app feedback mechanisms enable you to collect user feedback around the clock. Our app uses an inbuilt email systemfor getting the feedbacks from the user. Feedback channel helps build a relationship between you and your customers, leading to better engagement. When a user feels that their input is integral in the development and improvement of the app, they will be more willing to provide feedback which will lead to a better app-user connect

International Morse Code

Morse code is a method of transmitting text information as a series of on-off signals, lights, or clicks that can be directly understood by a skilled listener or observer without special equipment. The International Morse Coding encodes the ISObasic alphabet, some extra letters, the numerals and a small set of punctuation and procedural signals as standardized sequences of short and long signals called "dots" and "dashes", or "dits" and "dahs". Each character (letter or numeral) isrepresented by a unique sequence of dots and dashes. The duration of a dash is three times the duration of a dot. Each dotor dash is followed by a short silence, equal to the dot duration. The letters of a

word are separated by a space equal to three dots (one dash), and the words are separated by a space equal to seven dots. The dot duration is the basic unit of time measurement in code transmission. For efficiency, the length of each character in Morse is approximately inversely proportional to its frequency of occurrence in English. Thus, the very common letter in English, the letter "E" has the shortest code, a one dot.



(Fig.3)

IV. METHODOLOGY

Despite the fact that an increasing number of applications (such as decision support systems) should be produced utilizing an experimental process strategy such as prototyping, a large portion of new development work continues to focus on big operational applications with vast reach. The application systems are massive and well-organized. In most cases, user task comprehension and developer task proficiency are excellent. These variables point to a linear or iterative approach to assurance. A system development life cycle mode, in which each step of development is fully defined and has straightforward requirements for deliverables, feedback, and sign off, is the most typical technique for this stage class of problems. The system development life cycle is detailed because it remains an appropriate methodology for a large portion of new development activity. The core premise of the system development life cycle is that an application is conceived, developed, and implemented through a well-defined procedure. A creative process is structured by the life cycle. It is vital to know what should have been done, what has been done, and what remains to be done in order to manage and oversee the development effort. Because the phrases in the system development life cycle establish segments of the work flow that can be identified for managerial purposes and specify the papers or other deliverables to be produced in each phase, they provide a foundation for management and control. Different writers characterize the phases of the information system development life cycle differently, although the distinctions are mostly in the level of necessity and categorization method. The flow of development processes and the importance of control methods at each level are widely agreed upon

V. FUTURE SCOPE

This application eliminates the need for human labor and the challenges that come with it. It is a simple way to receive information about the various planned Learning of Morse code that are now being offered. For the young people among us (as in born with the internet in their stomach), Morse code was, and still is although not used in official communications, a way to communicate only with one tone. Letters are composed of long tones (DAH) and short tones (DI). The DAH and DI(T) symbolize the tone when one hears the letter of the airwaves. As an example, I will take the letter 'B'. In Morse code it is send as one long tone followed by three short ones. When we pronounce the letter is sounds like DAH DI DI DIT. Some people might recognize something like '- . . .' or DASH DOT DOT DOT from their boy scout period, but when spoken it does not sound like the actual letter being send.

VI. CONCLUSIONS

The application we propose to develop for Learning in based on Morse Code and will be accessible on Android mobilephones. The system will prove to be very helpful for blind people. In addition to this, the proposed system will enable them to communicate just like sighted people. It will also allow the visually impaired individuals to compose and send messages from their phones.

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