

CRYPTOGRAPHY

1. Theory

Cryptography is the transformation of plain text into cryptic text according to a rule and vice versa. It stores, transmits data and gets insights from its users, in addition to being a method for user verification.

2. Technologies

Earlier cryptography was effectively synonymous with encryption. But today it is already based on algorithms and computer science.

Cryptographic algorithms are designed around computational hardness assumptions. Cryptography is seen as an unbreakable thing. But in reality it can be hacked and broken. In the growing technology, the security is getting higher and higher, the algorithms and the content processing are increasingly complex and difficult to guess, so the cipher is also becoming better and more difficult to be breached.

Types of cryptographic algorithm:

- + ROT 13
- + Caesar Cipher
- + RSA
- + Base 64
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3. Possible real-world applications

Today, cryptography plays a very important role in determining the identity of the user of the application, or transmitting messages with secret content of the two parties. It has been gradually improved and now has Biometric Cryptography, giving us more security in terms of privacy.

MORSE CODE

1. Theory

Morse code is a method used in telecommunication to encode text characters as standardized sequences of two different signal durations, called dots and dashes, or dots and dashes.

Letters are defined as each character dots and dashes arranged in a certain order that is contracted between the sender and the receiver, and only both parties understand the meaning of the arranged characters and decode them. code them. Morse code was also used to make secret telegrams in the past to hide the content of the text.

2. How Morse code work:

As mentioned in the theory, the letters are contracted by dots and dashes between the sender and the receiver, so each letter is a separate character, and when entering text, the letters in the text will change. Converts according to conventional dots and dashes, with space being the silence, it can be an audio file recorded by dots and dashes or a text containing only dots and dash symbols.

Step 1: Get input data

Step 2: Detect symbols for each predefined word

Step 3: Create a new text with a symbols or emit the sound of that symbol

3. In real-life:

One of the most famous examples of a cipher in regular use is Morse Code. It is therefore well known for its common definition of Morse code symbology. But we can create our own symbols based on this principle and only we know the meaning of those symbols, so Morse code still has high security.

International Morse Code

1. A dash is equal to three dots.
2. The space between parts of the same letter is equal to one dot.
3. The space between two letters is equal to three dots.
4. The space between two words is equal to seven dots.

A	• —	U	• • —
B	• • • —	V	• • • — •
C	• • — •	W	• • — —
D	• — • •	X	• • • • —
E	•	Y	• • — — •
F	• • — • •	Z	• — — • •
G	• — — •		
H	• • • •		
I	• •		
J	• — — —		
K	• — • •	1	• — — — —
L	• — • • •	2	• • — — — —
M	• — — —	3	• • • — — —
N	• — • —	4	• • • • — —
O	• — — — —	5	• • • • • —
P	• • — — •	6	• — — • • •
Q	• — — • •	7	• — — • • • •
R	• • — •	8	• — — • • • • •
S	• • • •	9	• — — • • • • • •
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