

### General information

#### Cryptology

a science for encryption and decryption, so therefore also for informationsecurity

#### Cryptography

encryption of information / security for the own secret communication

#### Cryptanalytics

get information out of encrypted information / breach of the security

#### Encryption (Chiffrierung)

clear text gets converted into a hard to interpret character string

#### Decryption (Dechiffrierung)

unknown char strings get converted into readable signs

### EXAMPLE: String to morse code in Python

```
def translate_text(self, text):
    if text == "":
        return "You must provide a morse code
string to translate"
    translation = ""
    words = text.split(" ")
    for word in words:
        w = list()
        for char in word:
            if char.lower() in self.morse:
                w.append(self.morse[char.lo-
wer()])
        translation += " ".join(w)
    translation += " "
    return translation.rstrip()
```

Morse code has to be defined in a dictionary!

output: ... ..

### Gartenzaunverfahren PYTHON

```
from functools import partial
def crypt(message, key, encrypt=True):
    if key < 2:
        raise ValueError('key must be >= 2')
    message += ' ' * (-len(message) % key)
    step = key if encrypt else len(message) // key
    return ''.join(message[i::step] for i in
xrange(step)).rstrip()
encrypt = crypt
decrypt = partial(crypt, encrypt=False)
def main():
    message = 'Das ist eine lange Zeichenkette.'
    for i in xrange(2, 10):
        crypted = encrypt(message, i)
        print '%d) %-38r %-38r' % (i, crypted,
decrypt(crypted, i))
```

