

## Exercise 3: Decoding



**Purpose:** Learn how characters are represented in computers.

### Instructions

1. In the following exercises, manually lookup the character using the number.
2. Each group member will practice decoding characters from binary numbers.

Show your team assistant the matching result on the sheet **before** continuing!

#### a. Team Member 1: Decode

- i. 0111 1010
- ii. 0110 0011
- iii. 0110 0100
- iv. 0110 0110
- v. 0011 1010

#### b. Team Member 2: Decode

- i. 0101 1010
- ii. 0100 0011
- iii. 0100 0100
- iv. 0100 0110
- v. 0011 1011

3. Each group member will practice encoding words.

A word is just a sequence of letters, which will become a sequence of numbers!

Show your team assistant the matching result on the sheet **before** continuing to the next word.

#### a. Team Member 1: Decode

- i. 0110 0010  
0110 0101  
0111 0100
- ii. 0110 0011  
0111 0010  
0110 1001  
0110 1110  
0110 0111  
0110 0101

#### b. Team Member 2: Decode

- i. 0110 1110  
0111 0000  
0110 0011
- ii. 0100 0111  
0110 1100  
0110 1111  
0111 0111  
0010 0000  
0111 0101  
0111 0000

## Exercise 3: Decoding



### 4. Each group member will practice encoding phrases.

Keep track of your phrase in a text file.

Show your team assistant the result **before** continuing.

#### a. Team Member 1: Decode

A SPACE is also a character!!!

i. 0100 1100  
0110 1111  
0111 0111  
0110 1011  
0110 0101  
0111 1001  
0010 0000  
0110 0111  
0110 1000  
0110 1111  
0111 0011  
0111 0100  
0110 0101  
0110 0100

#### b. Team Member 2: Decode

A SPACE is also a character!!!

i. 0100 0011  
0100 0101  
0101 0100  
0010 0000  
0101 0110  
0110 1001  
0110 0010  
0110 1001  
0110 1110  
0010 0111  
0010 0000  
0110 1000  
0110 0001  
0111 0010  
0110 0100

### 5. Check you answers when you're done!

Decode secrets/3\_answers.txt.gpg.

- Right click on the file.
- Select Decrypt.
- Enter in the password supplied by the team assistant.