

TASK 1

Go to the website:

<http://www.bagill.com/text-converter.php>



Convert your name into binary.

Run-length encoding is a simple computer method of LOSSLESS compressing or encoding data.

When there is a pair or more than TWO bits the same (a 'run length' of common digits), we can compress those bits by writing how many - length - of those common bits (run) there are.

For example:

11000010 → 114010 - this means there is a string of four zeroes in the sequence

Data	Number of bits
11000010	8 bits
214010	6 bits ('compressed')

EXAMPLE

MY NAME (ASCII characters)	JOHN SMITH	HOW MANY DIGITS?
MY NAME (in BINARY - uncompressed)	0100101001101111011010000110111000 1000000101001101101101011010010111 010001101000	80 digits
MY NAME (in BINARY - compressed)	0120101202104102101402103130 16010120210210210102101201031 0130210130	67 digits = 17% compression

* COUNTING BITS IN THE 'UNCOMPRESSED' NAME → EACH LETTER = 1 BYTE = 8 BITS

Using the website:

<http://www.baqill.com/text-converter.php>

- fill in the table below with:

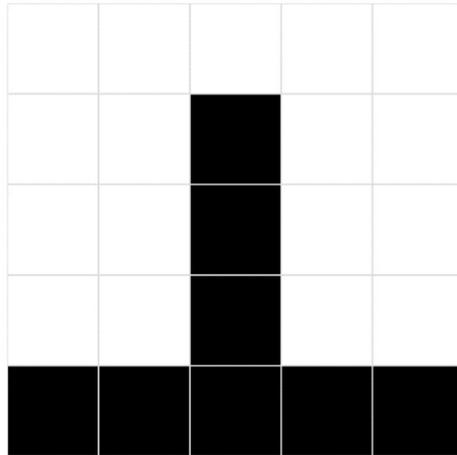
- your name
- your name in BINARY
- your name 'compressed' using **RUN-LENGTH ENCODING**
- how many digits storage space your name takes UNCOMPRESSED
- how many digits storage space your name takes COMPRESSED
- the compression %age

MY NAME (ASCII characters)		HOW MANY DIGITS?
MY NAME (in BINARY - uncompressed)		___ digits
MY NAME (in BINARY - compressed)		___ digits = ___ % compression

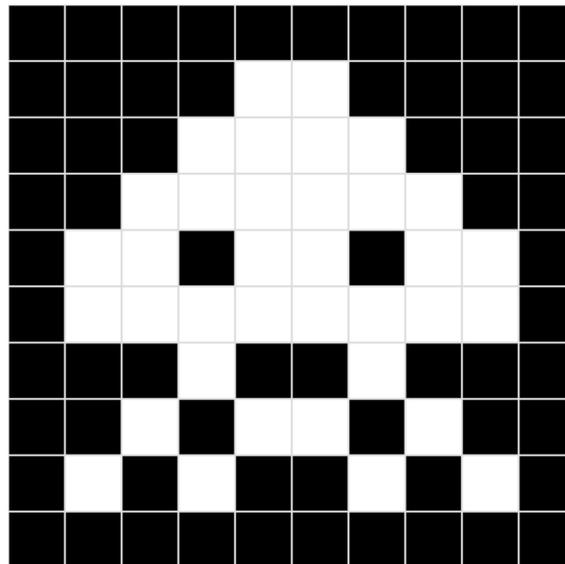
* COUNTING BITS IN THE 'UNCOMPRESSED' NAME → EACH LETTER = 1 BYTE = 8 BITS

TASK 2

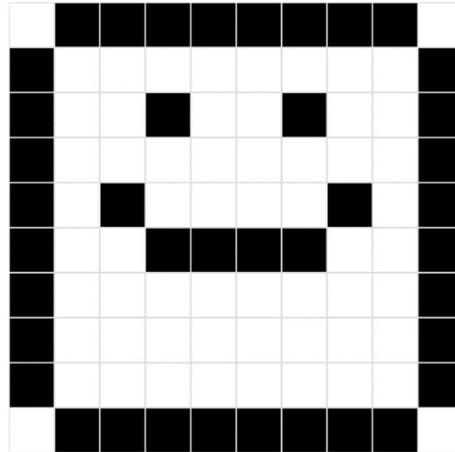
Write down the run length encoding for the following images. 0 means white and 1 means black.



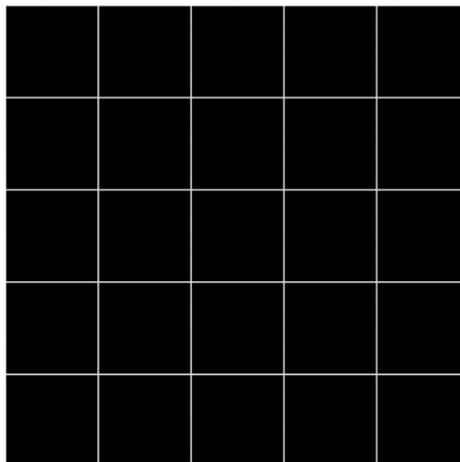
Original num of bits	Original bits	Compressed characters	Compressed num of characters



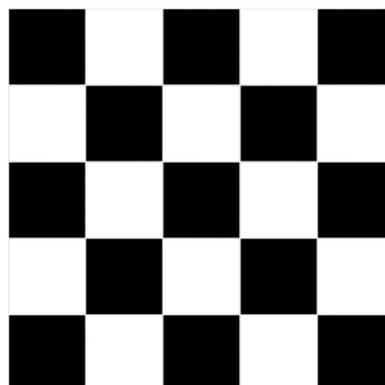
Original num of bits	Original bits	Compressed characters	Compressed num of characters



Original num of bits	Original bits	Compressed characters	Compressed num of characters



Original num of bits	Original bits	Compressed characters	Compressed num of characters



Original num of bits	Original bits	Compressed characters	Compressed num of characters