

# Coding Problem "Symcode"

## Introduction

Symcode is a binary-to-txt encoding scheme, representing binary data as ascii strings.  
Symcode uses a radix-8 representation, with each character representing 3 bits of data.

The Symcode index table is:

Index	0	1	2	3	4	5	6	7
Code	s	y	m	a	n	t	e	c

Please write a program that reads a given input file, and produces an output file for which each line of output is the Symcoded representation of the corresponding line of input.

## A simple example

The following stanza is from Lewis Carroll's "Jabberwocky."

*'Twas brillig, and the slithy toves  
Did gyre and gimble in the wabe:  
All mimsy were the borogoves,  
And the mome raths outgrabe.*

In the above quote, the word "gimble" is represented by the hexadecimal ascii string: 0x67 0x69 0x6d 0x62 0x6c 0x65

Sub-dividing the bytes into 3-bit blocks, then applying the encoding from the above index table will Symcode the string thusly:

Text	g			i			m			b			l			e		
Ascii (hex)	0x67			0x69			0x6d			0x62			0x6c			0x65		
Bits	0	1	1	0	0	1	1	1	0	1	1	0	1	0	0	1	0	1
Index	3	1	6	6	4	5	5	5	3	0	4	6	6	1	4	5		
Symcoded	a	y	e	e	n	t	t	t	a	s	n	e	e	y	n	t		

## Padding

You may have noticed the example above conveniently fits into 24-bit blocks (divisible by 3 and 8), and hence required no padding.

Symcode follows the same padding rules as base64 encoding; and we pad the trailing zeroes with dollar signs '\$'

The examples for "wabe" and "mimsy" follow, respectively:

Text	w			a			b			e			padding			padding		
Ascii (hex)	0x77			0x61			0x62			0x65			0x00			0x00		
Bits	0	1	1	1	0	1	1	1	0	1	1	0	0	0	0	1	0	1
Index	3	5	6	6	0	5	4	2	3	1	2	pad	pad	pad	pad	pad	pad	pad
Symcoded	a	t	e	e	s	t	n	m	a	y	m	\$	\$	\$	\$	\$	\$	\$

Text	m			i			m			s			y			padding		
Ascii (hex)	0x6d			0x69			0x6d			0x73			0x79			0x00		
Bits	0	1	1	0	1	1	0	1	0	1	1	0	1	1	0	1	0	0
Index	3	3	2	6	4	5	5	5	3	4	6	7	4	4	pad	pad	pad	pad
Symcoded	a	a	m	e	n	t	t	t	a	n	e	c	n	n	\$	\$	\$	\$

## Input

[The test input file can be downloaded here.](http://yetanotherwhatever.io/tp/60F66F5C-3357-4AA8-B0BF-04FD2DECD8E1.html)

Each line contains an input string which must be Symcoded.

Each input string:

- will be composed of ascii characters only
- should exclude trailing and preceding whitespace