

2 Short MIPS programs

Write a program in the MIPS assembly language. The input string should be read from the keyboard, converted and displayed on the screen.

You can use a template located at galera.ii.pw.edu.pl/~zsz/ecoar/mips.asm

1a	Convert all lower case letters to *. Input string > Wind On The Hill Conversion results> W*** O* T** H***
1b	Convert all upper case letters to *. Input string > Wind On The Hill Conversion results> *ind *n *he *ill
1c	Convert all digits to *. Input string > tel. 12-34-55 Conversion results> tel. **-----
1d	Convert all non letter characters to *. Input string > Wind On The Hill. Conversion results> Wind*On*The*Hill*
2a	Swap the position of characters in consecutive pairs. Input string > Wind On The Hill Conversion results> iWdnO nhT eiHll
2b	Reverse the order of characters in the string. Input string > Wind On The Hill Conversion results> lliH ehT nO dniW
2c	At the beginning of the output string put the characters from the odd positions, next the even. Input string > Wind On The Hill Conversion results> Wn nTeHlidO h il
3a	Replace each character belonging to a word by the number of upper case characters in this word (mod 10). Input string > Wind ON The HiLL Conversion results> 1111 22 111 3333
3b	Replace each character belonging to a word by the number of lower case characters in this word (mod 10). Input string > Wind ON The HiLL Conversion results> 3333 00 222 1111
3c	Replace each character belonging to a word by the length of the word (mod 10). Input string > Wind ON The HiLL Conversion results> 4444 22 333 4444

4a	<p>The first and the second character in the string represent the (begin and the end) markers, which define a substring. Your task is to replace all characters between the first occurrence of begin marker and first occurrence of the end marker with * character. If there is no begin or end marker in the input string (the string after the : character), then nothing should be changed. Replace the first three characters of the string with spaces.</p> <p>Input string > oi:wind on the hill</p> <p>Conversion results> wind *****ll</p>
4b	<p>The first and the second character in the string represent the (begin and the end) markers, which define a substring. Your task is to replace all characters before the first occurrence of begin marker and first occurrence of the end marker with * character. If there is no begin or end marker in the input string (the string after the : character), then nothing should be changed. Replace the first three characters of the string with spaces.</p> <p>Input string > oi:wind on the hill</p> <p>Conversion results> *****on the hi**</p>
4c	<p>The first and the second character define number of characters which should be left unchanged at beginning and at the end of the input string (the string after the : character). Your task is to replace all other characters with * character. If the sum of the two digits is larger than the length of the input string, then nothing should be changed. Replace the first three characters of the input string with spaces.</p> <p>Input string > 34:wind on the hill</p> <p>Conversion results> win*****hill</p>
4d	<p>The first and the second character define number of characters which should be changed at beginning and at the end of the input string (the string after the : character). Your task is to replace required characters with * character. If the sum of the two digits is larger than the length of the input string, then nothing should be changed. Replace the first three characters of the input string with spaces.</p> <p>Input string > 34:wind on the hill</p> <p>Conversion results> ***d on the ****</p>