4 Mixing the Words

4.1 Using String Functions

C provides various string functions including `strlen` and `strtok`. The former calculates the length of the string and the latter tokenizes the string. The process of separating the words is called tokenizing. To use these string functions, you should include `<string.h>`.

The following shows a sample program tokenizing the character string consisting of two words separated by a space:

```c
#include <stdio.h>
#include <string.h>

int main()
{
    char line[] = "Hello world";
    char *word;

    printf("strlen(\"%s\") = %d\n", line, strlen(line));
    word = strtok(line, " ");
    do {
        puts(word);
    } while (word = strtok(NULL, " "));

    return 0;
}
```

Beware that the function `strtok` operates in a modal way: the first call sets the initial string to tokenize identifying the first token, but from the second call, it requires the first argument should be `NULL`. Note also that the initial string is changed while tokenizing.

4.2 Programming Lab 4: wdmix.c

Reading two words from the input line, mix them into one word. The mixing procedure is performed by interleaving the characters of two words, where the first character of the mixed word comes from the first character of the first word. For example, given two words `"HELLO"` and `"WORLD"`, the mixed word is `"HWEOLRLLOD"`. The length of the first word should be either equal to or one greater than the length of the second word, say `"THREE"` and `"CANS"` can be given but `"ONE"` and `"YEAR"` are invalid.

The input consists of a single line in standard input. The input line contains two words separated by space. The maximum length of the words is 40. Your program should print to standard output. Print the mixed word if the lengths of the input words meet the requirements; print the underscore (_), otherwise.

Additional requirements for bonus points

- Declare and use at most two character arrays, i.e. the number of string variables in your code should be less than or equal to two.

- Check the quality of your code to confirm that there are no style issues.

Input	Output
HELLO WORLD	HWEOLRLLOD
ONE YEAR	_