

extractFirstChar

Write a C function `extractFirstChar()` that takes in two strings `str1` and `str2` as parameters, constructs a word formed by the first character of each word of the string `str1`, and stores the newly constructed word into the string `str2`. You may assume that any two words in `str1` are separated by a space character. If the input string `str1` is "How are you?", then the string `str2` is "Hay". The function returns `str2` to the calling function via call by reference.

A sample program template is given below:

```
#include <stdio.h>
#include <string.h>
void extractFirstChar(char *str1, char *str2);
int main()
{
    char str1[80], str2[80], *p;

    printf("Enter a string: \n");
    fgets(str1, 80, stdin);
    if (p=strchr(str1, '\n')) *p = '\0';
    extractFirstChar(str1, str2);
    printf("extractFirstChar(): %s\n", str2);
    return 0;
}
void extractFirstChar(char *str1, char *str2)
{
    /* Write your code here */
}
```

```
#include <stdio.h>
#include <string.h>
void extractFirstChar(char *str1, char *str2);
int main()
{
    char str1[80], str2[80], *p;

    printf("Enter a string: \n");
    fgets(str1, 80, stdin);
    if (p=strchr(str1, '\n')) *p = '\0';
    extractFirstChar(str1, str2);
    printf("extractFirstChar(): %s\n", str2);
    return 0;
}
void extractFirstChar(char *str1, char *str2)
{
    int i,j=0,isspace = 1,len;
    len = strlen(str1);

    for(i=0;i<len;i++)
    {
        if(isspace==1)
        {
            str2[j] = str1[i];
            j++;
            isspace = 0;
        }
        if(str1[i]==' ')
        {
            isspace = 1;
        }
        str2[j] = '\0';
    }
}
```

Some sample input and output sessions are given below:

- (1) Test Case 1
Enter a string:
How?
extractFirstChar(): H
- (2) Test Case 2
Enter a string:
How are you?
extractFirstChar(): Hay
- (3) Test Case 3
Enter a string:
Who is this boy?
extractFirstChar(): With
- (4) Test Case 4
Enter a string:
This is a test.
extractFirstChar(): Tiat

remember to add `str2[j] = '\0'`