

maxCharToFront

Write a C function maxCharToFront() that accepts a character string str as parameter, finds the largest character from the string (based on ASCII value), and moves it to the beginning of the string. E.g., if the string is "adebc", then the string will be "eadcb" after executing the function. The string will be passed to the caller via call by reference. If more than one largest character is in the string, then the **first appearance** of the largest character will be moved to the beginning of the string. For example, if the string is "adecbe", then the resultant string will be "eadcbe". The function prototype is given as follows:

```
void maxCharToFront(char *str);
```

A sample template for the program is given below:

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

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

Some test input and output sessions are given below:

- (1) Test Case 1:
Enter a string:
adebc
maxCharToFront(): eadbc
- (2) Test Case 2:
Enter a string:
afgcdeg
maxCharToFront(): gafcdeg
- (3) Test Case 3:
Enter a string:
cba
maxCharToFront(): cba

```
void maxCharToFront(char *str)
{
    char max;
    int i, j;
    int len;
    len = strlen(str);

    max = str[0];
    for(i=0; str[i]!='\0'; i++)
    {
        if(str[i]>max)
        {
            max = str[i];
            j=i;
        }
    }

    for(i=j; i>=0; i--)
    {
        str[i] = str[i-1];
    }
    str[0] = max;
    str[len]='\0';
}
```

(4) Test Case 4:
Enter a string:
ab
maxCharToFront(): ba