COMP1511 Tutorial 5

2D arrays | array functions | strings

2D Arrays - galaxy.c

Passing arrays into functions

A function that takes an array:

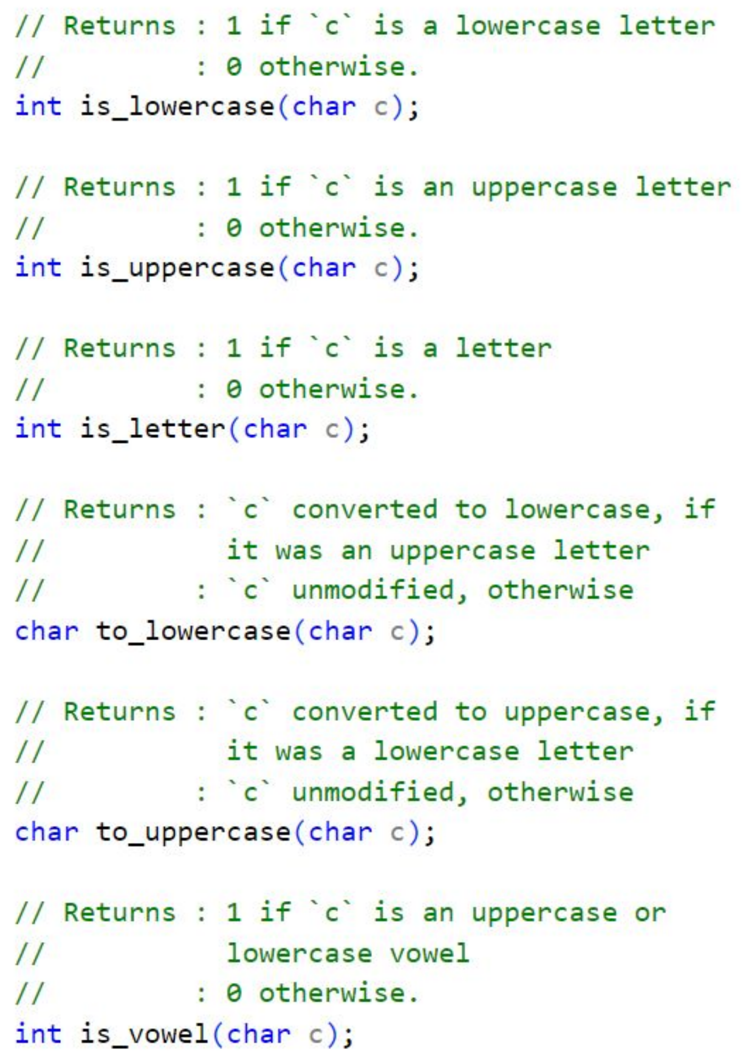
```
void print_array(int array[SIZE]);
```

Calling this function:

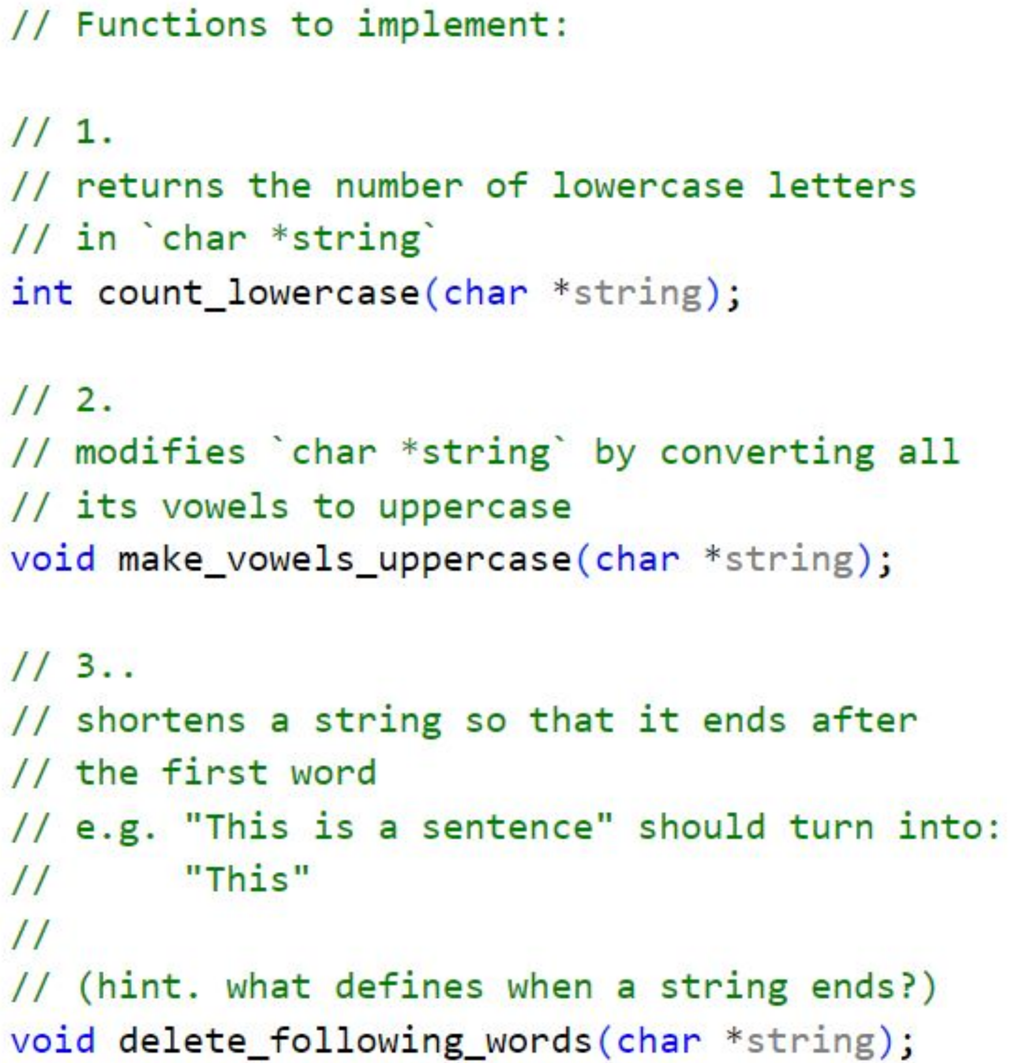
```
print_array(my_array);
```

Strings Recap

String Functions



```c
// Returns : 1 if `c` is a lowercase letter
//         : 0 otherwise.
int is_lowercase(char c);

// Returns : 1 if `c` is an uppercase letter
//         : 0 otherwise.
int is_uppercase(char c);

// Returns : 1 if `c` is a letter
//         : 0 otherwise.
int is_letter(char c);

// Returns : `c` converted to lowercase, if
//           it was an uppercase letter
//         : `c` unmodified, otherwise
char to_lowercase(char c);

// Returns : `c` converted to uppercase, if
//           it was a lowercase letter
//         : `c` unmodified, otherwise
char to_uppercase(char c);

// Returns : 1 if `c` is an uppercase or
//           lowercase vowel
//         : 0 otherwise.
int is_vowel(char c);
```



```c
// Functions to implement:

// 1.
// returns the number of lowercase letters
// in `char *string`
int count_lowercase(char *string);

// 2.
// modifies `char *string` by converting all
// its vowels to uppercase
void make_vowels_uppercase(char *string);

// 3..
// shortens a string so that it ends after
// the first word
// e.g. "This is a sentence" should turn into:
//      "This"
//
// (hint. what defines when a string ends?)
void delete_following_words(char *string);
```

Side Notes

C Expressions

You can think of C expressions in a similar way to maths expressions:

```
return 'A' <= c && c <= 'Z'; // Let c = 'E'

return 'A' <= 'E' && 'E' <= 'Z';

return 1 && 1; // True is represented by 1 in C

return 1;
```