

Gebze Technical University

Computer Engineering Department

Introduction to Programming

CSE102 HW08

Fall 2014

Due Date

27.11.2014, 23:59

Implement the following functions;

1. **(15 pts) word_inverter:** A function that inverts letters of each word in a given string. You can use all utilities of the standard c string library.

Input format:

<string>

sample string number example

Output

elpmas gnirts rebmun elpmaxe

2. **(15 pts) word_crossover:** A function that swaps words of two given strings in a way that i'th word would be swapped if the following criteria is met:

$i \% n == 0$

n is provided by the user. You can use all utilities of the standard c string library.

Input format:

<n>

<string1>

<string2>

2

He likes riding horses

She hates kissing babies

Output

She likes kissing horses

He hates riding babies

Another example:

3

He likes riding horses

She hates kissing babies

Output

She likes riding babies
He hates kissing horses

3. **(15 pts) word_inverter:** A function that inverts letters of each word in a given string. **You can't use** any of the utilities of the standard c string library.

Input format:

<string>

sample string number example

Output

elpmas gnirts rebmun elpmaxe

4. **(15 pts) word_crossover:** A function that swaps words of two given strings in a way that i'th word would be swapped if the following criteria is met:

$i \% n == 0$

n is provided by the user. **You can't use** any of the utilities of the standard c string library.

Input format:

<n>

<string1>

<string2>

2

He likes riding horses

She hates kissing babies

Output

She likes kissing horses

He hates riding babies

Another example:

3

He likes riding horses

She hates kissing babies

Output

She likes riding babies

He hates kissing horses

5. **(20 pts) sort_string:** A function that sorts given strings alphabetically using insertion sort.

Input format:

<n><string>

4

sample string number 1

sample string number 3

sample string number 2

sample

Output

sample

sample string number 1
sample string number 2
sample string number 3

Maximum string count is 10.

6. **(20 pts) sort_string_ptr:** A function that sorts given string pointers alphabetically using insertion sort (Don't swap strings, swap pointers instead).

Input format:

<n><string>

4

sample string number 1
sample string number 3
sample string number 2
sample

Output

sample
sample string number 1
sample string number 2
sample string number 3

Maximum string count is 10.

You should also write tester functions for all parts.

Your main function must be in following format;

```
int main() {
    //You have to complete the code and correct all kind of errors

    //////////////////////////////////////
    puts("-----");
    printf("testing the function xxx \n");

    ...call test_part1...

    puts("-----");
    //////////////////////////////////////

    //////////////////////////////////////
    puts("-----");
    printf("testing the function xxx \n");

    ...call test_part2...

    puts("-----");
    //////////////////////////////////////
```

```

////////////////////////////////////
puts("-----");
printf("testing the function xxx \n");

...call test_part3...

puts("-----");
////////////////////////////////////

////////////////////////////////////
puts("-----");
printf("testing the function xxx \n");

...call test_part4...

puts("-----");
////////////////////////////////////

////////////////////////////////////
puts("-----");
printf("testing the function xxx \n");

...call test_part5...

puts("-----");
////////////////////////////////////

////////////////////////////////////
puts("-----");
printf("testing the function xxx \n");

...call test_part6...

puts("-----");
////////////////////////////////////

}

```

Sample Input(Your program should accept whole input data even if you cannot complete some parts of homework):

```

sample string number example
2
He likes riding horses
She hates kissing babies
sample string number example
2
He likes riding horses
She hates kissing babies

```

```
4
sample string number 1
sample string number 3
sample string number 2
sample
4
sample string number 1
sample string number 3
sample string number 2
sample
```

Notes:

- You should submit 1 file;
 - main.c
- Add all **files into a folder and compress it** for submission. The folder names will be restricted to the following format:
HW#_studentid_studentname.
 - Example:
HW01_121044001_Abdullah_Akay
- Upload soft copy of your homework to Moodle course web page
- **DON'T submit hard copy of your assignment.**
- Don't forget to test your code in the provided Linux virtual machine.
- Obey good programming rules (Indentation, Documenting, Well Commenting, Avoiding magic numbers, Non-ascii characters etc.)
- **Strictly follow submission and file, folder naming rules.**