

## String related problems (Total 15 questions)

SL	Problem statement	Difficulty levels						
1.	Write a program in C to find the length of a string without using any library function.	*						
	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is andy”</td><td>15</td></tr><tr><td>“Abc 123 7&amp;*&amp;”</td><td>13</td></tr></table>		Sample Input	Sample Output	“My name is andy”	15	“Abc 123 7&*&”	13
	Sample Input		Sample Output					
	“My name is andy”		15					
“Abc 123 7&*&”	13							
2.	Write a program in C to concatenate two strings without using any library function.	*						
	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name ” “is andy”</td><td>“My name is andy”</td></tr><tr><td>“123abc” “*A*B”</td><td>“123abc*A*B”</td></tr></table>		Sample Input	Sample Output	“My name ” “is andy”	“My name is andy”	“123abc” “*A*B”	“123abc*A*B”
	Sample Input		Sample Output					
	“My name ” “is andy”		“My name is andy”					
“123abc” “*A*B”	“123abc*A*B”							
3.	Write a program in C to count how many vowels are there in a string.	*						
	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is andy”</td><td>4</td></tr><tr><td>“Are you READY yet?”</td><td>7</td></tr></table>		Sample Input	Sample Output	“My name is andy”	4	“Are you READY yet?”	7
	Sample Input		Sample Output					
	“My name is andy”		4					
“Are you READY yet?”	7							
4.	Write a program in C to count the number of words in a string.	*						
	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is andy”</td><td>4</td></tr><tr><td>“Abc 123 7&amp;*&amp;”</td><td>3</td></tr></table>		Sample Input	Sample Output	“My name is andy”	4	“Abc 123 7&*&”	3
	Sample Input		Sample Output					
	“My name is andy”		4					
“Abc 123 7&*&”	3							
5.	Write a program in C to find the reverse of a string.	**						

	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is Andy”</td><td>“ydnA si eman yM”</td></tr><tr><td>“Abc 123 7&amp;*&amp;*”</td><td>“*&amp;*&amp;7 321 cbA”</td></tr></table>	Sample Input	Sample Output	“My name is Andy”	“ydnA si eman yM”	“Abc 123 7&*&*”	“*&*&7 321 cbA”	
Sample Input	Sample Output							
“My name is Andy”	“ydnA si eman yM”							
“Abc 123 7&*&*”	“*&*&7 321 cbA”							
6.	<p>Write a program in C to convert lowercase string to uppercase.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is andy”</td><td>“MY NAME IS ANDY”</td></tr><tr><td>“&amp; I am 20 years old”</td><td>“&amp; I AM 20 YEARS OLD”</td></tr></table>	Sample Input	Sample Output	“My name is andy”	“MY NAME IS ANDY”	“& I am 20 years old”	“& I AM 20 YEARS OLD”	*
Sample Input	Sample Output							
“My name is andy”	“MY NAME IS ANDY”							
“& I am 20 years old”	“& I AM 20 YEARS OLD”							
7.	<p>Write a program in C to toggle the case of each character in a string.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is Andy”</td><td>“mY NAME IS aNDY”</td></tr><tr><td>“&amp; I am 20 Years old”</td><td>“&amp; i AM 20 yEARS OLD”</td></tr></table>	Sample Input	Sample Output	“My name is Andy”	“mY NAME IS aNDY”	“& I am 20 Years old”	“& i AM 20 yEARS OLD”	*
Sample Input	Sample Output							
“My name is Andy”	“mY NAME IS aNDY”							
“& I am 20 Years old”	“& i AM 20 yEARS OLD”							
8.	<p>Write a program in C to sort a string array in alphabetic order.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is Andy”</td><td>“ AMadeimnnsy”</td></tr><tr><td>“Abc 123 7&amp;*&amp;*”</td><td>“ &amp;&amp;**1237Abc”</td></tr></table>	Sample Input	Sample Output	“My name is Andy”	“ AMadeimnnsy”	“Abc 123 7&*&*”	“ &&**1237Abc”	**
Sample Input	Sample Output							
“My name is Andy”	“ AMadeimnnsy”							
“Abc 123 7&*&*”	“ &&**1237Abc”							
9.	<p>Write a program in C to count the occurrences of a character in a string regardless of its case.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is Andy” ‘a’</td><td>2</td></tr><tr><td>“WELCOME to CSE, everyone” ‘E’</td><td>6</td></tr></table>	Sample Input	Sample Output	“My name is Andy” ‘a’	2	“WELCOME to CSE, everyone” ‘E’	6	*
Sample Input	Sample Output							
“My name is Andy” ‘a’	2							
“WELCOME to CSE, everyone” ‘E’	6							
10.	<p>Write a program in C to check whether a string is a palindrome or not.</p>	**						

	<table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“My name is andy”</td><td>no</td></tr><tr><td>“madam”</td><td>yes</td></tr></table>	Sample Input	Sample Output	“My name is andy”	no	“madam”	yes			
Sample Input	Sample Output									
“My name is andy”	no									
“madam”	yes									
11.	<p>Write a program in C to add the digits in a string.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“I am 20 years old”</td><td>2</td></tr><tr><td>“Abc 123 7&amp;* &amp;*”</td><td>13</td></tr></table>	Sample Input	Sample Output	“I am 20 years old”	2	“Abc 123 7&* &*”	13	**		
Sample Input	Sample Output									
“I am 20 years old”	2									
“Abc 123 7&* &*”	13									
12.	<p>Write a program in C to count occurrences of a word in a string.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“I liked the story about the sad giant” “the”</td><td>2</td></tr><tr><td>“It is what it is” “it”</td><td>1</td></tr></table>	Sample Input	Sample Output	“I liked the story about the sad giant” “the”	2	“It is what it is” “it”	1	***		
Sample Input	Sample Output									
“I liked the story about the sad giant” “the”	2									
“It is what it is” “it”	1									
13.	<p>Write a program in C to remove all repeated characters in a string.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“i like programming in C”</td><td>“i lkeprogamnC”</td></tr><tr><td>“My name is Andy”</td><td>“My nameisAd”</td></tr></table>	Sample Input	Sample Output	“i like programming in C”	“i lkeprogamnC”	“My name is Andy”	“My nameisAd”	***		
Sample Input	Sample Output									
“i like programming in C”	“i lkeprogamnC”									
“My name is Andy”	“My nameisAd”									
14.	<p>Write a program in C to find the maximum occurring character in a string.</p> <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>“Welcome to CSE”</td><td>E (or e)</td></tr><tr><td>“mmmttssarrddd”</td><td>D (or d)</td></tr><tr><td>“mmmttssarrDDd”</td><td>D (or d)</td></tr></table>	Sample Input	Sample Output	“Welcome to CSE”	E (or e)	“mmmttssarrddd”	D (or d)	“mmmttssarrDDd”	D (or d)	***
Sample Input	Sample Output									
“Welcome to CSE”	E (or e)									
“mmmttssarrddd”	D (or d)									
“mmmttssarrDDd”	D (or d)									
15.	<p>Write a program in C to reverse the words in a string.</p>	***								

	Sample Input	Sample Output	
	“My name is Andy”	“Andy is name My”	
	“Abc 123 7&*&*”	“7&*&* 123 Abc”	