Practice Set: String (20 problems) – v202

<table>
<tr><th>SL</th><th>Problem statement</th><th>Difficulty levels</th></tr>
<tr><td>1.</td><td>Program that will take as input an uppercase letter, and convert it into a lowercase letter.

<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>A</td><td>a</td></tr><tr><td>M</td><td>m</td></tr><tr><td>5</td><td>Wrong input</td></tr></table></td><td>*</td></tr>
<tr><td>2.</td><td>Program that will take as input a letter, and toggle the case of the letter.

<table><tr><th></th><th>Sample output</th></tr><tr><td>A</td><td>a</td></tr><tr><td>m</td><td>M</td></tr><tr><td>5</td><td>Wrong input</td></tr></table></td><td>*</td></tr>
<tr><td>3.</td><td>Program that will take as input a digit, and convert it into its numerical representation.

<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>1</td><td>1</td></tr><tr><td>5</td><td>5</td></tr><tr><td>A</td><td>Wrong input</td></tr></table></td><td>*</td></tr>
<tr><td>4.</td><td>Program that will take as input a string, and find out its length.

<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>SPL Laboratory</td><td>14</td></tr><tr><td>United International University</td><td>31</td></tr></table></td><td>*</td></tr>
<tr><td>5.</td><td>Program that will take as input a string, and convert all the uppercase letters in it to lowercase.

<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>CSI 122</td><td>csi 122</td></tr><tr><td>United International University</td><td>united international university</td></tr></table></td><td>*</td></tr>
</table>

6. Program that will take as input a string, and toggle cases of all the letters. *

Sample input	Sample output
SPL Laboratory	spl lABORATORY
United International University	uNITED iNTERNATIONAL uNIVERSITY

7. Program that will find out if a given string is a palindrome or not. **

Sample input	Sample output
civic	Palindrome
economic	Not palindrome

8. Program that will take as input two strings, and find out the one that is lexicographically greater than the other. *A lexicographically smaller string appears earlier in a dictionary.* **

Sample input	Sample output
SPL Lab SPL Lad	SPL Lab
SPL Lab SPL Bad	SPL Bad
SPL Lab SPL Lab	Both equal
SPL Lab SPL Laboratory	SPL Lab

9. Program that will copy the contents of a string to another. *

Sample input	Sample output
SPL Lab	SPL Lab
United International University	United International University

10. Program that will take as input two strings str1 and str2, and concatenates the contents of str2 to the end of str1. **

Sample input	Sample output
SPL Laboratory Discrete Math	SPL LaboratoryDiscrete Math

11. Program that will take as input two strings str1 and str2, and find out if str2 is a substring of str1. ***

Sample input	Sample output
SPL Laboratory Lab	Substring

	SPL Laboratory APL | Not substring	
12.	Program that will take as input a string (containing letters and spaces only), and print the words contained in the string in separate lines. **Sample input** | **Sample output** SPL Laboratory | SPL Laboratory United International University | United International University	***
13.	Program to find if two strings are the same ignoring case. **Sample input** | **Sample output** spl sql | No John@bscse.uiu.ac.bd john@bscse.uiu.ac.bd | Yes	**
14.	Program that will change a password. The actual password and the input password will be taken input. If they match, the system will print "Login successful." Otherwise it will print "Login failed." **Sample input** | **Sample output** abc123 abcdef | Login failed A1b2c3 A1b2c3 | Login successful	**

15. Program to find if two words are anagrams. [Two strings are anagrams if they have the same number of occurrences of each letter used in the strings] ***

Sample input	**Sample output**
LISTEN SILENT	Yes
GREASE AGREES	Yes
MATCH CATCH	No

16. Take input a string and a character. Now replace all the occurrences of that character with **$**. **

Sample input	**Sample output**
Game a	G$me
Ronaldo o	R$nald$

17. Program to find the number of vowels & consonants in an input string. **

Sample input	**Sample output**
Game	Vowels:2, Consonants:2
Ronaldo	Vowels:3, Consonants:4

18. Program to determine if an input string contains at least one letter and one digit. **

Sample input	**Sample output**
Nafiz	No
Nafiz011	Yes

19. Write a program to reverse a string. **

Sample input	**Sample output**
game	emag
ronaldo	odlanor

<table>
<tr>
<td>20.</td>
<td>Take input a string and a substring. Determine the number of occurrences of that substring into the input string.
<table>
<tr><th>Sample input</th><th>Sample output</th></tr>
<tr><td>str1: NNNaf
substr: NN</td><td>2</td></tr>
<tr><td>str1: Nafenaeed
substr: Na</td><td>2</td></tr>
</table>
</td>
<td>***</td>
</tr>
</table>