

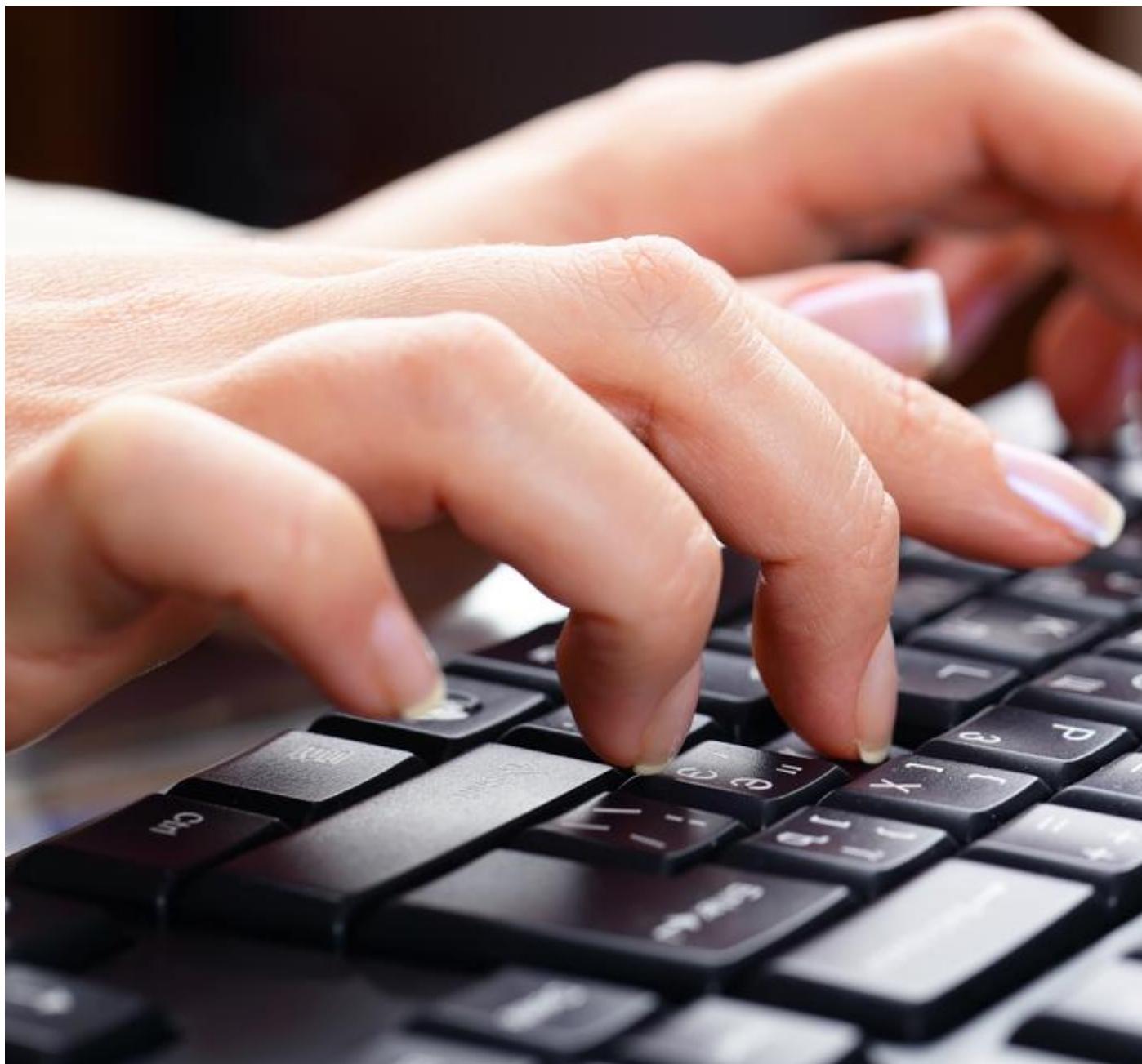
Damaged Gift Articles

Gita knows that Sita is an expert in embedded programming and she asks her to write a program that would make her high tech scanner like device to identify the damaged gift articles.



She is only concerned with the gift articles that have 1 character inscribed on it. She wants to classify the gift items as items with lower case letters inscribed, items with upper case letters inscribed, items with digits (0 to 9) inscribed and damaged items.

Can you help Sita in writing this program?



Input and Output Format:

Input consists of a character. Output consists of the string --- “upper case”, “lower case”, “digit” or “damaged”.

Sample Input 1:

A

Sample Output 1:

upper case

Sample Input 2:

&

Sample Output 2:

damaged