

MATH.2720 Introduction to Programming with MATLAB  
Homework on Character Strings (Due 4/27)

Please email your function files to me at `stephen_pennell@uml.edu`

These problems are mostly taken from Attaway's *MATLAB: A Practical Introduction to Programming and Problem Solving*.

1. Write a function file that generates two random integers between 10 and 30 and returns a character string consisting of the two integers joined together. For example, if the integers are 11 and 29 the output should be the string '1129'. There is no input to the function. Hint: The command `randi([m, n], 1, k)` generates a  $1 \times k$  array of integers uniformly distributed between  $m$  and  $n$ .
2. Write a function file that takes as input a character string consisting of integers and the character x, deletes the x's, and produces as output a character string consisting only of the integers. For example, if the input string is '1x23x456x7' the output string should be '1234567'. Hint: Use `strfind` to locate the x's and then delete those entries from the string.
3. Write a function file that takes as input a word in the form of a character string, scrambles the letters, and returns the scrambled word as output. For example, if the input is 'MATLAB' the output might be 'LAMBAT'. Hint: You might find the `randperm` command helpful. `randperm(n)` returns a random permutation of the integers 1 through  $n$ .