**Lab 2 Row/Column Transposition**

To implement this, you don’t need to write the text into an array.

Instead read the characters from the plaintext string, skipping numColumns (number of columns) between each character.

In a class called Encrypter, write a method with header as follows:

public static String encryptRowColumn(String plaintext, int numColumns)

**Pseudocode:**

Remove spaces from plaintext

Calculate numRows required for plaintext

If plaintext doesn’t fit exactly, pad it with Xs

String: ciphertext = ""

For col = 0 To numColumns - 1

Integer: index = col

For row = 0 To numRows - 1

ciphertext = ciphertext + plaintext[index]

index += numColumns

Next row

Next col

Note: plaintext[index] in this pseudocode is like stuff we would use to indicate an element of an array. Here it is used to specify a character in a String. What method would you use to do that?

Test the code in main() method of another class.

To decipher a message in a program, notice that decoding a message that was originally written in an array that has R rows and C columns is the same as encrypting a message with an array that has C rows and R columns.

Write another methods with header as follows:

public static String decryptRowColumn(String cipherText, int numColumns)

This method should call the encryptRowColumn() method.