Lab 8 Worksheet **Name:** _____
Networks/Data Encryption
Network:

Exercise 11.1: Running the network simulator. Follow instructions.

Exercise 11.2: Destroying a packet. Follow the instructions and answer the following questions:
Can the receiver obtain the missing packet to complete the transmission? What happens?

Exercise 11.3: Damaging a packet. Follow the instructions and answer the following questions:
Describe what happens and how the receiver remedies the problem.

Exercise 11.4: Spying on the Network. Follow the instructions and answer the following questions.
Describe what a hacker would see. Do you think this would prevent the hacker from correctly determining the original message?

Exercise 11.5: Modifying the encryption algorithm. Follow the instructions.
Describe your observations of how your changes affect the encrypting the original message.

Data Encryption: Read through the instructions!

Exercise 12.1: Running the encryption simulator

Original string:._____

Encrypted string:._____

Exercise 12.3: Stepping through the process

A pair of characters falls in the same row or column in the matrix:

The last character (the odd one) is processed:

Exercise 12.4: Refining the algorithm: Rewrite Step 4 of the encryption algorithm to specify the order in which the characters found at the remaining corners of the rectangle are used.

Exercise 12.5: Decryption

Original string:_____

Encrypted string:_____

Result of encrypting the encrypted data:

Result of encrypting the encrypted data with a new matrix:

Exercise 12.6: Explanation

Explain why this encryption algorithm is its own inverse, that is, why running the algorithm on encrypted data returns the original data.

Exercise 12.7: Repeating characters: Describe what is peculiar about the encoded string and explain why ths happens.

Exercise 12.8: An improvement: Do you think that a problem is caused when a string having repeating characters or an odd number of characters is encrypted with this method? How would you change the algorithm to solve this problem?