

Student	Hongliang Yu	75
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Part 1

	Available	Marks
Create a matrix <i>message1</i> that contains the character data above, together with the numerical labels for rows and columns. Display this matrix.	5	4
Generate the ciphertext using the following ruleset: Start at 5,5 and work towards the left. Read odd-numbered columns upwards and even-numbered columns downwards. Display the encrypted message as a vector <i>ciphertext1</i> which contains each character of the ciphertext as a separate element in the vector.	20	15
Suppose that the message is written in a 3x9 array rather than a 5x5 array. Generate an appropriate matrix <i>message2</i> and use the two methods given in the introduction to generate two more vectors <i>ciphertext2</i> and <i>ciphertext3</i> .	15	10
Which of the two matrices, <i>message1</i> or <i>message2</i> do you think produces the most secure encryption methods? In a comment at the end of your script say which you think is the most secure and why this is the case. Do not write more than 100 words on this.	5	3
Commenting and use of white space	5	5
	TOTAL	37
Comments Good commenting and use of white space. 1.1 Lines 9-15 create the matrix well. You don't need lines 16-36. 1.2 Good creation of the ciphertext. You don't need to condense it into a single character string 1.3 You could have created the matrix in a single line of code similar to line 12. The final output is fine. The loop methods you've used are a bit slow, but they get the job done. 1.4 Good point about the number of elements available.		

Part 2

	Available	Marks
Create an appropriate matrix to hold the decrypted message and populate it from the ciphertext. Display the matrix once it has been populated. METHOD 1	13	10
Create an appropriate matrix to hold the decrypted message and populate it from the ciphertext. Display the matrix once it has been populated. METHOD 2	13	10
Create an appropriate matrix to hold the decrypted message and populate it from the ciphertext. Display the matrix once it has been populated. METHOD 3	13	9
Which of the two matrices, 5x5 or 9x6, do you think produces the most secure encryption methods? In a comment at the end of your script say which you think is the most secure and why this is the case. Do not write more than 100 words on this.	6	5
Commenting and use of white space	5	4
	TOTAL	38
Comments Good commenting and use of white space overall, although some sections would benefit from a few more comments. Again, you could have created the matrices in far fewer lines of code, but the matrices are correct. 2.1, 2.2, 2.3 Methods are good, although the third one would be better if you didn't need to use the hard-coded locations. 2.5 Good point about the space and time required leading to better security.		