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Encryption And Decryption Of Text Using Matrices (Cryptography)

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Abstract

Cryptography is the study of encrypting and decrypting secret messages. Secured communication involves encryption process at the sending end and decryption process at the receiving end of the communication system. The idea behind encrypting a message is to make it 'unreadable' to unintended parties. The encryption and decryption of text, using matrices (Hill Cipher), is implemented in this paper, to showcase the application of linear algebra to Cryptography. The method uses modular arithmetic, as well as the basic linear algebra of matrices. The results were obtained using MATLAB software. In conclusion, it was discovered that matrices has a place in Cryptography , serving purposes from securing messages, hiding examination questions from students and sharing sensitive information.

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