

CHAPTER 5

CONCLUSION

5.1. Conclusion

Based on the research that has been done, it can be concluded that:

1. Encryption of Vigenere Cipher 256 in audio wave files, the audio of the message being conveyed sounds unclear or meaningless.
2. The audio files used with the wave or *.wav extension can be audio with mono and stereo channels.
3. The speed of the encryption and decryption process is affected by the audio file size, which means that the larger the file size, the longer the encryption and decryption time.
4. MAE and PSNR results show the performance of encryption and decryption results on audio waves. The average value of the encryption process on PSNR is 28.345, and MAE is 97.0625. The average value of the decryption process on PSNR and MAE is 0.0, indicating that the decryption process is successful.

5.2. Suggestions

This research cannot be separated from shortcomings, and some suggestions are proposed for further research as follows:

1. Need to be tested using audio files with mp3, ogg, and Flac extensions.
2. It is recommended to perform other than MAE and PSNR testing, which may result in better performance.
3. For Further research is needed by combining the Vigenere cipher with other methods.
4. For further research, several methods of scrambling audio signals can be added so that the information is not readable or the sound is very noisy.