CHAPTER VI

CONCLUSION AND FURTHER RESEARCH

6.1 Conclusions

This program is able to compress a text file with a selected algorithm. Both algorithms can produce a binary compressed file with smaller file size than the original text file with its file size, but only in text mode. The graphical mode is unable to generate a compressed file and get the file size. The LZ77 algorithm compresses the text file into a series of tuples that consists of (offset, length, next char). Shannon-Fano algorithm compresses the text into binary codes. Based on the tests performed above with the program, the LZ77 algorithm generates a smaller compressed file than the Shannon – Fano algorithm with average compression ratio 33,71%. The Shannon-Fano's compression ratio varies depend on the number of symbols contained in the text file.

6.2 Further Researches

This compression program is still very simple and leaves many room for development. For further research, this application should be able to generate the output file and compare the file size, even compute the compression ratio in the graphical mode perfectly. There may also be a pattern for the LZ77 about how the file sizes compute, like what happened in the case of file that contains only 1 to 4 characters. A decompression feature to decode the compressed file into its original state using the two algorithms is also deemed necessary to develop.