Compression

# Introduction

# Homework Exercise

## Task 1

A screenshot of a computer code

Description automatically generated

001001011011110111 = 00 100 101 101 111 01 11 = ACDDFB 11

The last 2 digits can not be converted because there is no code for 11. If we reverse the characters we can fully decode it getting:

111011110110100100 = 111 01 111 01 101 00 100 = FBFBDAC

However, in both cases the message is un-readable so without more context it is impossible to tell if this was a mistake or reversed to further obfuscate the message.

## Task 2

The first step is to count the occurrence of each character in the sentence, (32) is used to represent a space character. The output from the program written to do this is shown in Figure 2. We then put this data into some diagram software and build the Huffman tree as shown in Figure 3.

A screenshot of a computer

Description automatically generated

## Analysis

## Conclusion

# Extension Exercise