Division of Labor Statement

The following outlines the specific sections and tasks completed by each group member:

• Jaci Rojas

• Worked on completing all of section 3.2.1 which consisted of creating cover files for image, sound, and 2 text files and embedding each with an image, sound, short text, and long text file. This led to the creation of a total of 16 stego files with the use of the tools snow and steghide. Also worked on completing all of section 3.2.2 which consisted of using the same tools again to check the information of each stego file and to ensure that they were correctly embedded. These tools were also used to extract the information (including hidden files) of each stego file. I also worked on completing the documentation within the Lab Report for 3.2.1 and 3.2.2.

• David Xiao

• Worked on completing all of section 3.2.3, consisting of setting up a sender and receiver with a man in the middle to capture the transmitted data on the network. As well as converting the hidden message from IP IDs (HEX) to ASCII. Also worked on completing section 4.1, which involved the capacity analysis of cover files and their embedded file limits, this was connected with 4.2 when analyzing file sizes after chain steganographic techniques were applied to them with steghide. Also worked on the documentation within the Lab Report for 3.2.3, 4.1, and 4.2(Steghide), as well as the compilation of all the files into a packaged Deliverables.zip file.

• Shareena Wiggins

• Worked on completing section 4.2(CAT) using the macOS environment. The CAT tool works differently from the steghide tool, as the information being embedded lacks any encryption or compression. The analysis of applying CAT vs steghide helps demonstrate the strengths and weaknesses of using one technique over another. Also worked on the documentation of section 4.2 (CAT), and the completion of the word problems for Section 5 of the Lab Report.

Note: Group member **Luis Feng Wu** did not participate and left the group before the completion of the project. Additionally, the division of work may differ from initial plans, as the group came together later than expected due to miscommunication. Despite these challenges, all members contributed to their assigned sections to ensure the completion of the lab report.