**Problems Encountered & Solutions**

Programming is all about problem solving and it goes without saying that we encountered many problems throughout the course of our programming project. The two problems that stood out as difficult to solve were the problem with reading data and the problem with the search bar implementation.

**1. Issues reading data:**

In order for our program to work we had to somehow read in the data from the excel sheet of data and store it in memory in order to be used by the program. At first, we thought it would be a good idea to read in the data and split it by commas into arrays of data.

However, we soon realised that this is an issue due to there being commas in the reviewers’ comment so the program would end up splitting at the commas in the reviewer’s comment too giving us an arrayOutOfBounds error. After a long period of trial and error testing, we finally came up with a solution. We decided to use the “splice()” and “join()” functions to place a “^” character at the start of the reviewer’s comment and at the end. We then split it by that character and successfully extracted the text into a String.

After implementing this solution into our program, we discovered an alternate more efficient solution using the Table class. However we had already completed the project at this stage and decided not to implement this method.

**2. Search bar implementation:**