**Tetris -Report**

**Approach**

In the first week we decided that we wanted to make a Tetris based game. We then decided on the first chuck of code we wanted to complete within the first section of the assignment. Josh made the general board and coded how to make the blocks fall, DJ did the basic shape generation and jack started the collision logic between shapes.

Within the first week of the assignment, we had this completed apart from the collision logic as it proved to be more labor intensive than first thought as ever different block and each of its rotations had different logic. This part of the code did cause some problems which will be later covered. After the first assigned parts of code where finished (apart from the collision) we started working on the music. We synthesized the music from sheet music and then added in other sound affects till we were happy with how it sounded. DJ and Josh then coded in the background music and made sure the .WAV file would be exported with the solution. On the final day of the assignment, we had quite a lot of work left to do, such as the validation for rotating shapes when they would end up outside the bounds of the board. This was a priority as not having this validation would crash the game. At the end of the assignment, we managed to come together and complete the solution we wanted and designed.

**Problems**

As there were still some problems with the collision code and Jack was having trouble finding errors as he had been working on the same code for a long time Josh and DJ took over this section to have a fresh look at it. We started by reading over Jack’s code and using Microsoft paint to visualise each rotation and shape falling down the board. The issue was as simple as there had been a “}” in a nested if statement causing a boolean variable to output the wrong value and a couple wrong coordinates.

We also had a couple issues with our time management as some things took far more time than they should have such has the collision logic we’ve talked about and making the music. As we started the assignment the day it was set, we believed we had more time than we did which caused some issues towards the end of the assignment. Although we did manage to fix this as it’s very easy to communicate with each other as we all live together and work well together picking up anything anyone is struggling with.

**Future Enhancements**

If we had longer to complete this assignment, then we would have wanted to add a couple more features. Something we wanted to add was the ability to make the blocks fall faster while holding “s” this would make early gameplay for a more experienced player better as they wouldn’t be getting frustrated with blocks falling so slow. We also would have liked to add a leaderboard system and the ability to see the next shape that was going to generate just like in some Tetris games. Allowing the player the ability to know the next shape greatly increases the skill cap as players can plan their moves and placements in advance.