Advanced software engineering deliverable 3 polysphere problem

This problem was approached to us a unique problem. The group began researching how to complete this problem by first going back to the basics and experimenting with breadth first search and depth first search. It was decided that depth first search would be a better approach to completing the problem. We then began research into which coding languages would the most optimal for the submission.

The languages the group explored and implemented the solution with were.

- HTML
- CSS
- JAVASCRIPT

Once the coding began a implementation of the problem was able to completed. As can be seen on figure 1.

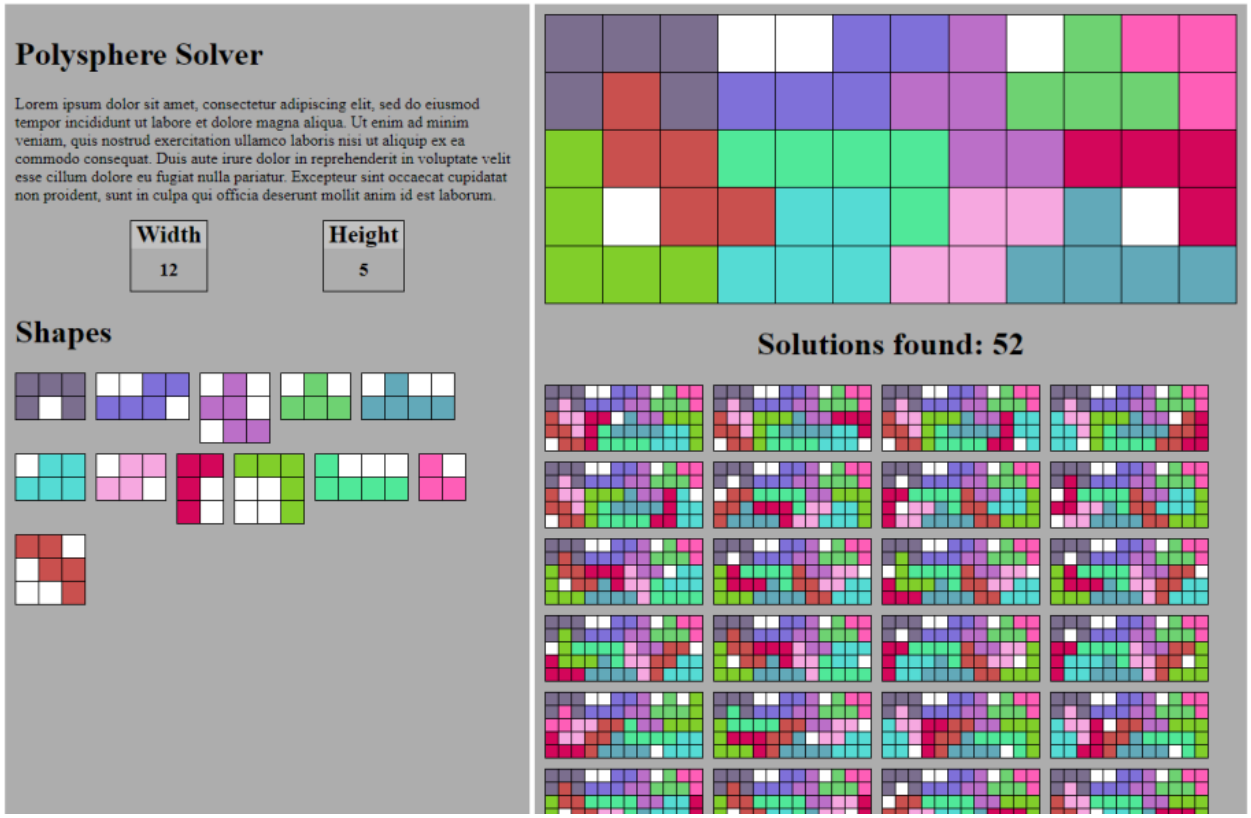

Fig 1: First full implementation of the software.

The result that can be seen on figure 1 is a first solution from the group, the algorithm had managed to find the first solution, however the grid used in this solution is a w12*h5 grid. This is because the software that was implemented can work for grids of all sizes and furthermore it should be noted that the shapes and gird sizes are customizable for this problem with our solution. Hence the approach that we have taken for this solution works for grids of all sizes and shapes of all sizes.

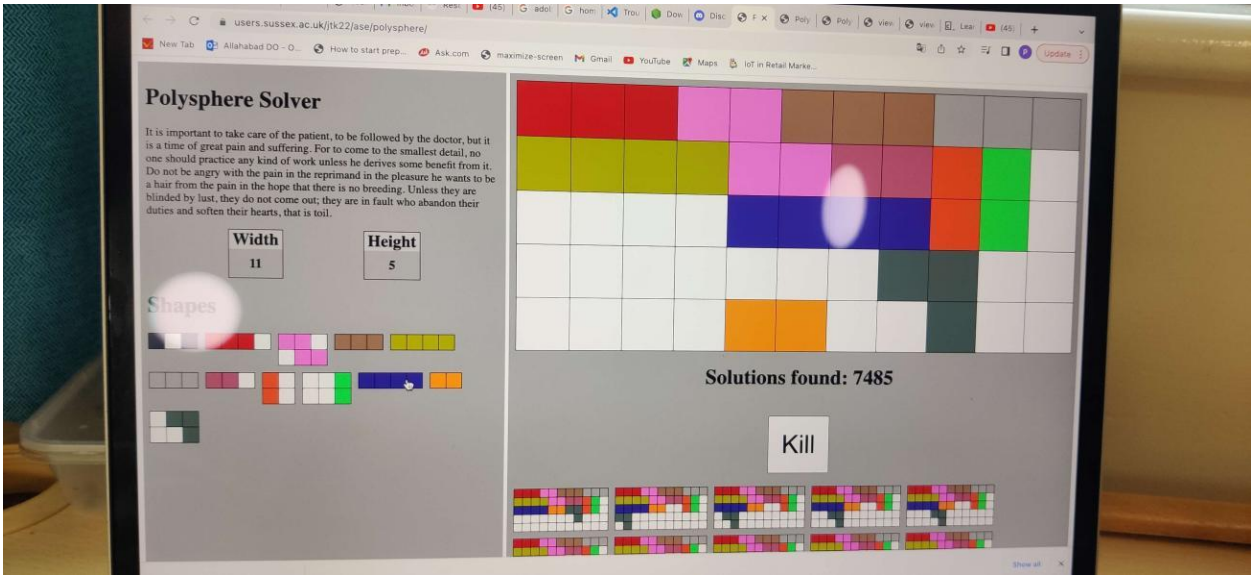

*Figure 2: the solution with w11*h5 grid.*

After working on the problem further the group found that the required grid for the submission experienced some limitations. We found that the algorithm in this case is working however runtime is quite long. This is issue was found most prevalent in the w11*h5 grid. This grid does print out solutions however due to the prolonged runtime the algorithm is struggling to print out all the solutions in the adequate and correct amount of time.

If further time was allowed the group could have successfully implemented the problem correctly and could have solved the runtime issue that is being experienced.

Signed

ASE group 1