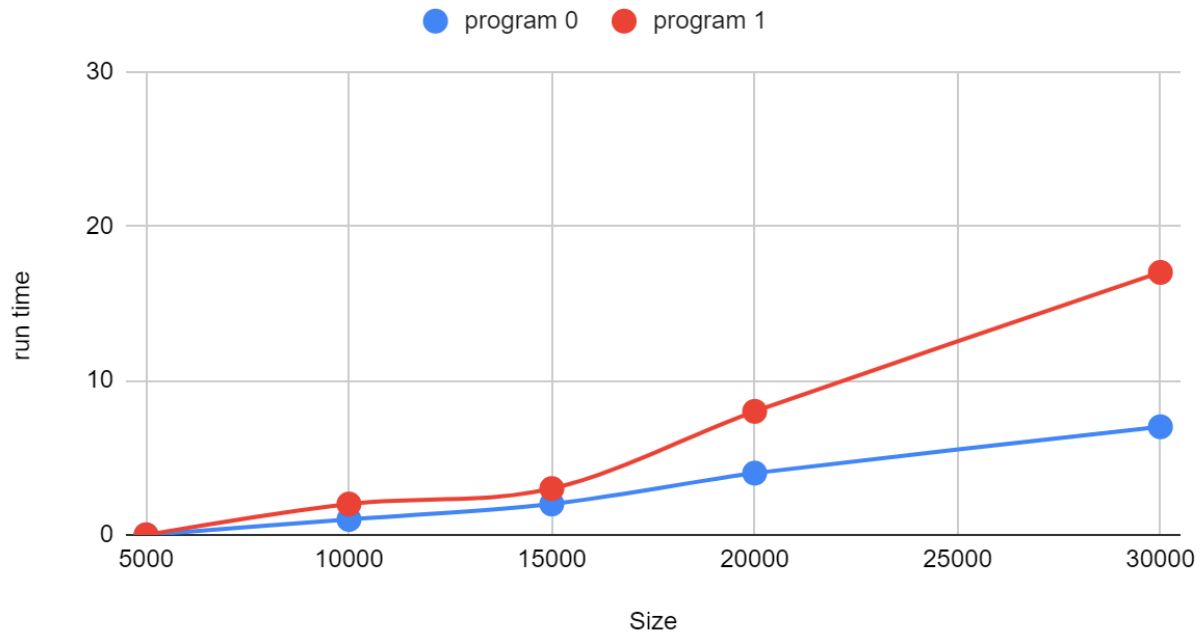


## Program 0 vs Program 1



From the above graph we know that program 0 runs faster than program 1. We knew this from the start because of how each of the programs iterate through their matrices. Program 0 iterates through its matrix by going through the matrix row by row. Program 1 on the other hand goes through the matrix column by column. Both of the programs have the same complexity but we know that program 0 will run faster because of how the data is stored. program 0 runs faster because it is checking the adjacent elements in memory while program1 on the other hand has to jump around in the memory to find it's next value. As the rows get bigger we see an even greater difference since there is more memory for program 1 to look through.