Week 1 Reflection

1. What was the focus of this week?

This week was about being introduced to algorithms and why they were important. We then went on to look at integer multiplication algorithms and then the mergesort algorithm.

In part 2, Asymptotic analysis, we looked at an overview of analysing and comparing functions to determine which was faster using big-O notation e.g. O(n) and define mathematical attributes of functions using proofs.

1. What did I learn this week?

This week I learned about the merging stage of the mergesort algorithm (of which previously I didn’t know how to implement) as well as that there are multiple ways to do something as simple as integer multiplication, some of them very obscure like the Karatsuba algorithm. I also learned more about O, Ω and , which state the performance of an algorithm with an upper bound, lower bound and equal bound of timing.

1. What did I already know?

I was introduced to the big-O notation in senior informatics when analysing the running time of an algorithm, but now I have a better understanding of it. I also have looked at the implementing the mergesort algorithm previously.

1. What were some challenges this week?

In the final parts of the Asymptotic Analysis lectures, I struggled to keep up as much of the content was less computing and algorithmic based and more maths based, using proofs to show that certain statements about function runtime were true or false, maths which I have not learned yet.

1. What do I need to improve on for next week?

Next week, I will need to slow down on the parts I struggle with (such as maths proofs) and research a bit so I can understand them better and tie them back to the algorithms.