

A level computer science at Nelson & Colne College

Under normal circumstances you would have been invited in to college to experience some A level computer science work. For obvious reasons, that cannot happen so here a few things that will hopefully spark your interest.

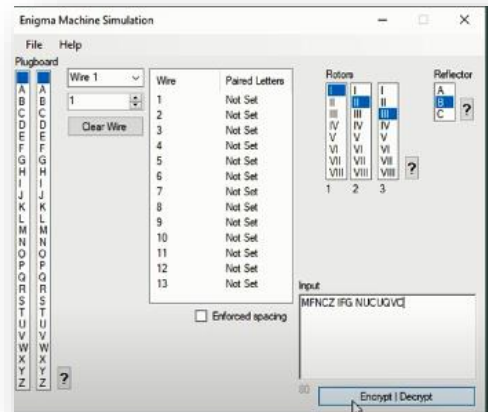
Searching, sorting and pathfinding

This is a fundamental area of computer science that you will have covered at GCSE. At A level we go further and compare the performance of similar algorithms when applied to large data sets. Read through the explanations of searching, sorting and pathfinding [here](#) and then have a go at answering the questions given below their explanations.

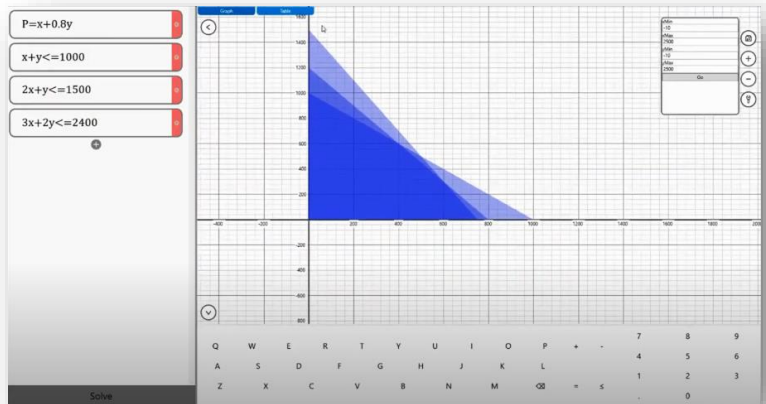
Non examined assessment

You may have done one of these for your GCSE. A level students choose their own NEA topic and work on it through most of the second year. To give you an idea of how your computer science skills will improve while you study A level, here are some recent NEAs completed by Nelson & Colne College A level computer science students.

[Enigma machine simulator](#) Simulating the complexity of this war time coding / decoding machine was a lot more difficult than you may have thought.



[Simplex algorithm demonstrator](#) – A part of the A level further maths syllabus that is easier to understand when it is seen visually.



[Othello](#) – both a two player and one player .v. artificial intelligence solution

Should Computers Run the World?

36 minutes YouTube. A really interesting talk from Hannah Fry who is able to tie together computer science, mathematics and the real world. What's not to like?