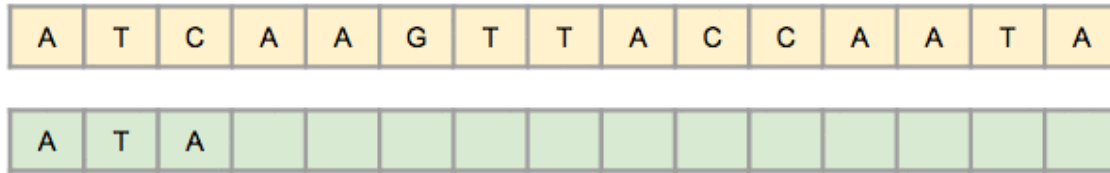# String Matching/Search Visualiser Requirement Gathering Workshop

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Part of 4th Year Individual Project

What are string matching algorithms.

- Algorithms that search for a pattern of characters within a larger text.

- Often associated with the CTRL-F functionality, common to all of us.

- The ones taught at the University are the naïve one , Boyer-Moore and the Knuth-Morris-Pratt.

Why the project and all this?

- The aim of my project is to make it easy for people to learn and get the intuition for how these algorithms work.

- This will be done via a product that shows all the steps of the algorithms while they're working.

- The study will help me determine what form, features and visual aspects of the product are necessary or helpful so people like you can learn in the most efficient and easy way.

Step 1:

k

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	C	G	C	H	A	C	A	B	T	G	C	H	A	A

↑ MISMATCH   ↑ QSBC[C] = 1, so shift 1 character to the right

A	C	A	B	T	G	C

Step 2:

k

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	A	C	G	C	H	A	C	A	B	T	G	C	H	A	A

↑ ↑ ↑ MISMATCH   ↑ QSBC[A] = 5, so shift 5 characters to the right

A	C	A	B	T	G	C