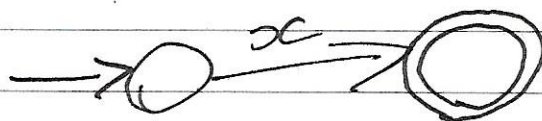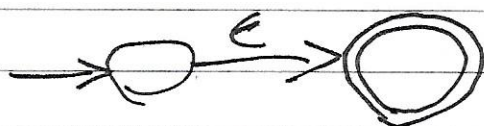# Thompson's Construction

Thompson's Construction is used to construct Nondeterministic Finite Automatas (NFA) from regular expressions

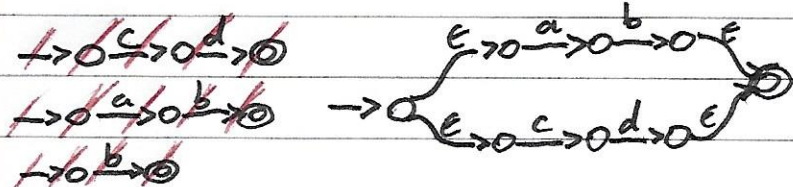The NFA will recognise the same language as the regular expression

For normal (non-special) characters (eg x), the following fragment is pushed to the stack

The empty regular expression (ε) is included too

example ab.cd.l   (Postfix)
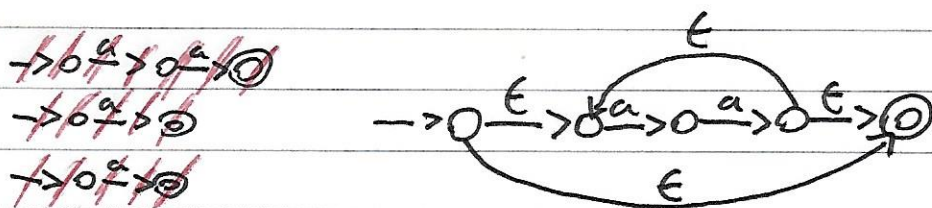{ab, cd}

(NB. →o→a→o→ε→o→b→◎ = →o→a→o→b→◎)

NFA stack

NB:
With Thompsons Construction;
· Accept states never have arrows coming out of them
· Regular states either have 1 or 2 arrows

example 2   aa.* {ε, aa, aaaa,...}