**Non Deterministic Finite Automata(NFA) to Deterministic Finite Automata(DFA)**

**Topic :**

Converting Non Determinstic finite Automata to Deterministic finite Automata by using subset construction.

**Abstract :**

In this problem , we aim is to find the solution of Non deterministic finite automata to deterministic finite automata by using subset construction concept.

By applying subset construction ,we can find out the all possibilities of tranisitions for each state and also taking care of epsilon.All possibilities are stored in the stacks because we can pop the last element easily(LIFO).

There are 10 functions is used to find out conversion of NFA to DFA.They are:

* lambda\_closure():It find out the all transition state and including the lamba closure.
* seek(): it checks whether transition element is present or not in the stack.
* move():moving the transition element into tranlist(Data structure).
* peek():viewing of the last element in the stack.
* tostring():multiple transition states are merges into the single alphabet.
* sort():sorting of transition element in the ascending order.
* copy():copying of elements from one stack to the another stack.
* push():inserting the transition element into the stack.
* pop():deleting of last element from the stack.
* display\_Dtran():displaying of DFA transition table.

**Test cases:**

* converting NFA to DFA without epsilon.
* converting NFA to DFA with epsilon.
* multiple final states can be accepted.
* two or more input symbols can be accepted.
* multiple transition can be accepted.

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