

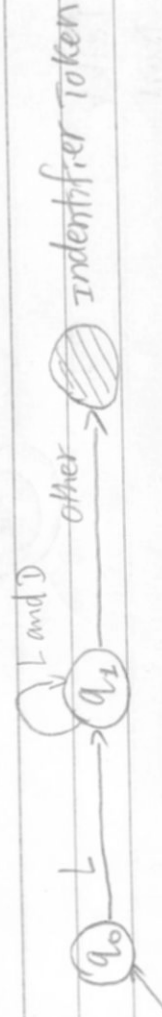
Data Link

CmpSci 6280

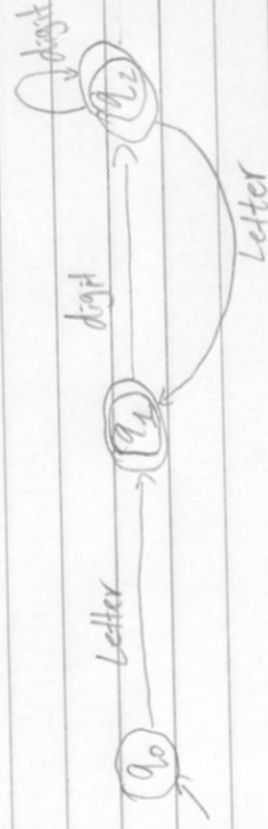
Homework 3

1. Alphabet $\Sigma = \{\text{Letter}, \text{Digit}\}$

$\text{Token}(u) = \begin{cases} \text{when token} \\ \text{while token} \\ \text{where token} \\ \text{identifier token} \end{cases}$

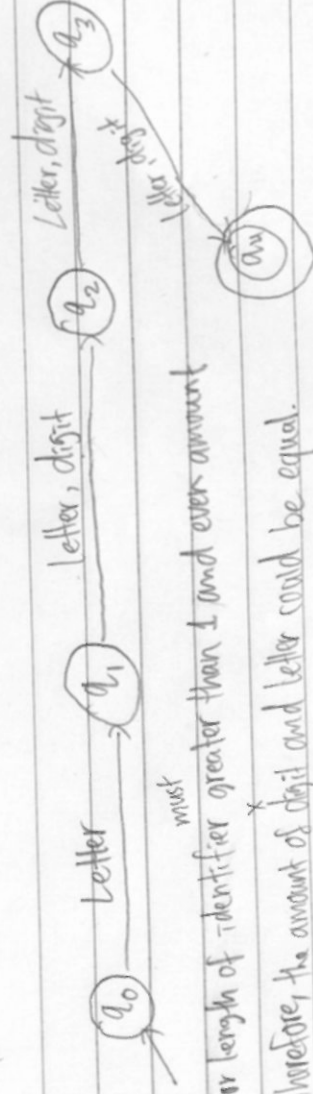


2. Alphabet $\Sigma = \{\text{Letter}, \text{Digit}, \text{Whitespace}\}$



- The graph above, when the identifier ends with letter, the final state is the q_1 . When the identifier ends with digit, the final state is q_3 .

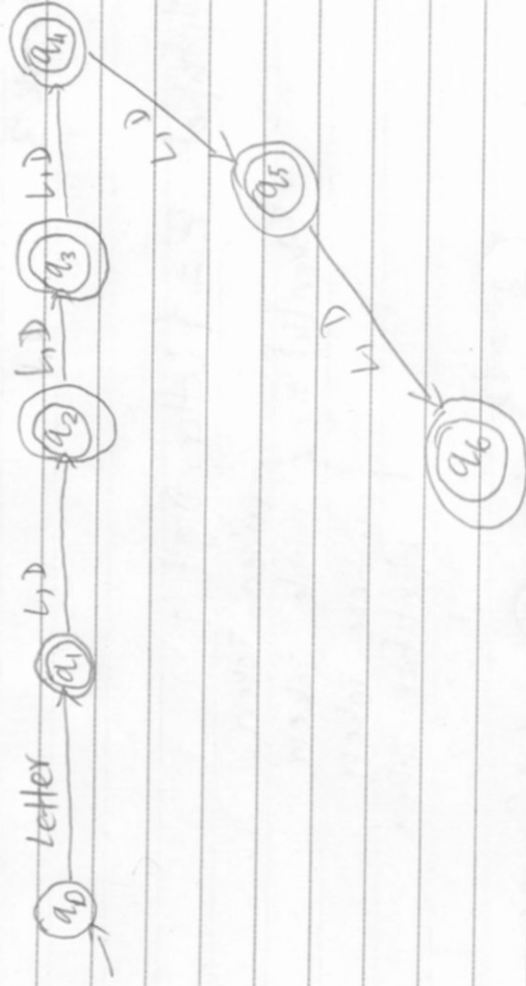
3. Alphabet $\Sigma = \{\text{Letter}, \text{digit}, \text{WS}\}$



- For length of identifier greater than 1 and even amount

Therefore, the amount of digit and letter could be equal.

4. The ϵ -identifier is the final states.



L = Letter

D = Digit