



Assignment 3 (PDA & CFG)

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CFG:

1.

①

$$S \rightarrow aSb \mid bSa \mid SS \mid \varepsilon$$

2.

$$\begin{aligned} S &\rightarrow aasb \mid asab \mid saab \mid \\ &\quad aabs \mid bsaa \mid baSa \mid \\ &\quad baas \mid sbaa \mid asba \mid \\ &\quad sabalabsal \mid abas^\varepsilon \\ S &\rightarrow \varepsilon \end{aligned}$$

3.

$$S \rightarrow \Sigma | a | b | aSa | bSb$$

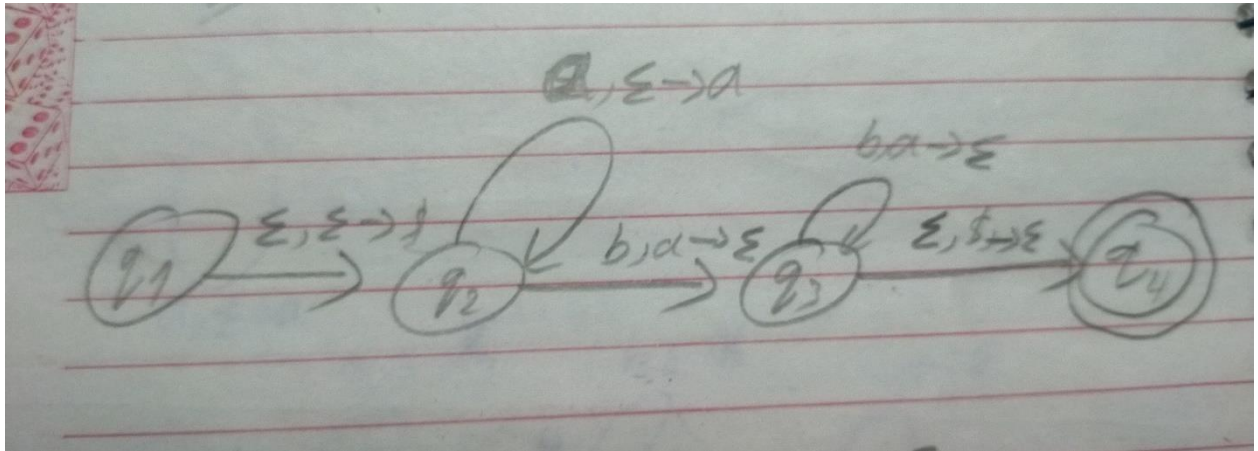
4.

④

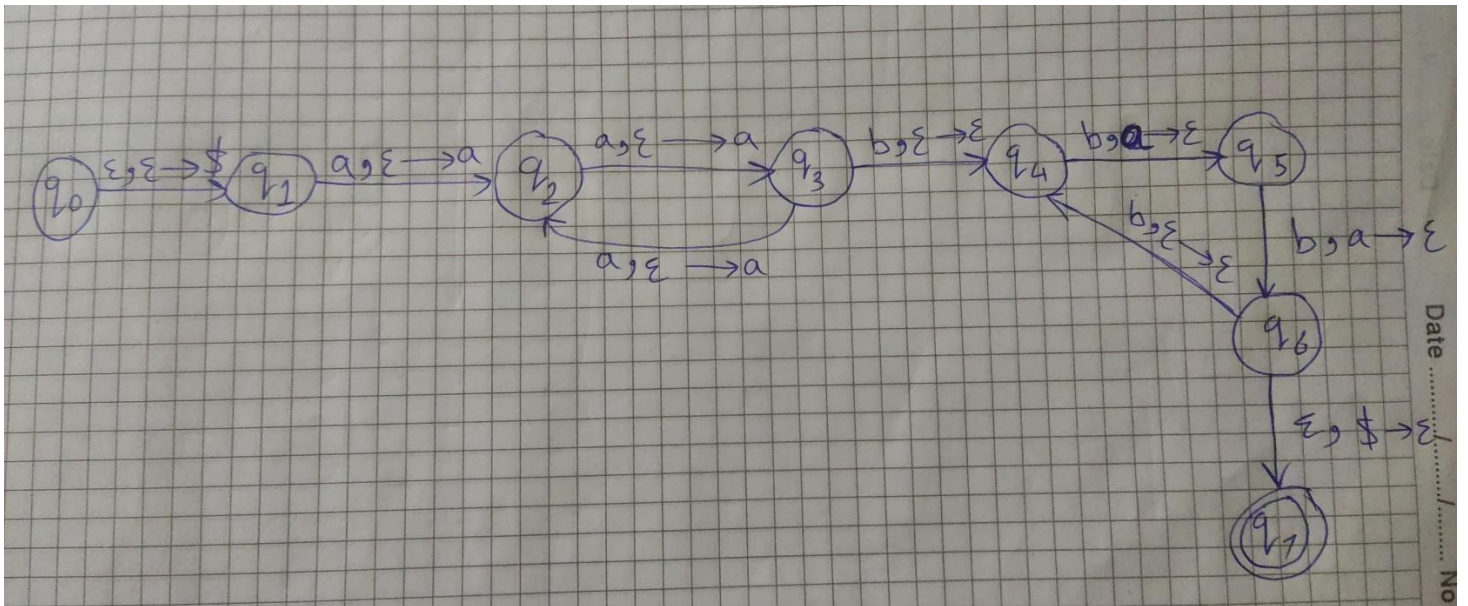
$$S \longrightarrow aaaS | \epsilon$$
$$T \longrightarrow aaTb | \epsilon$$

PDA:

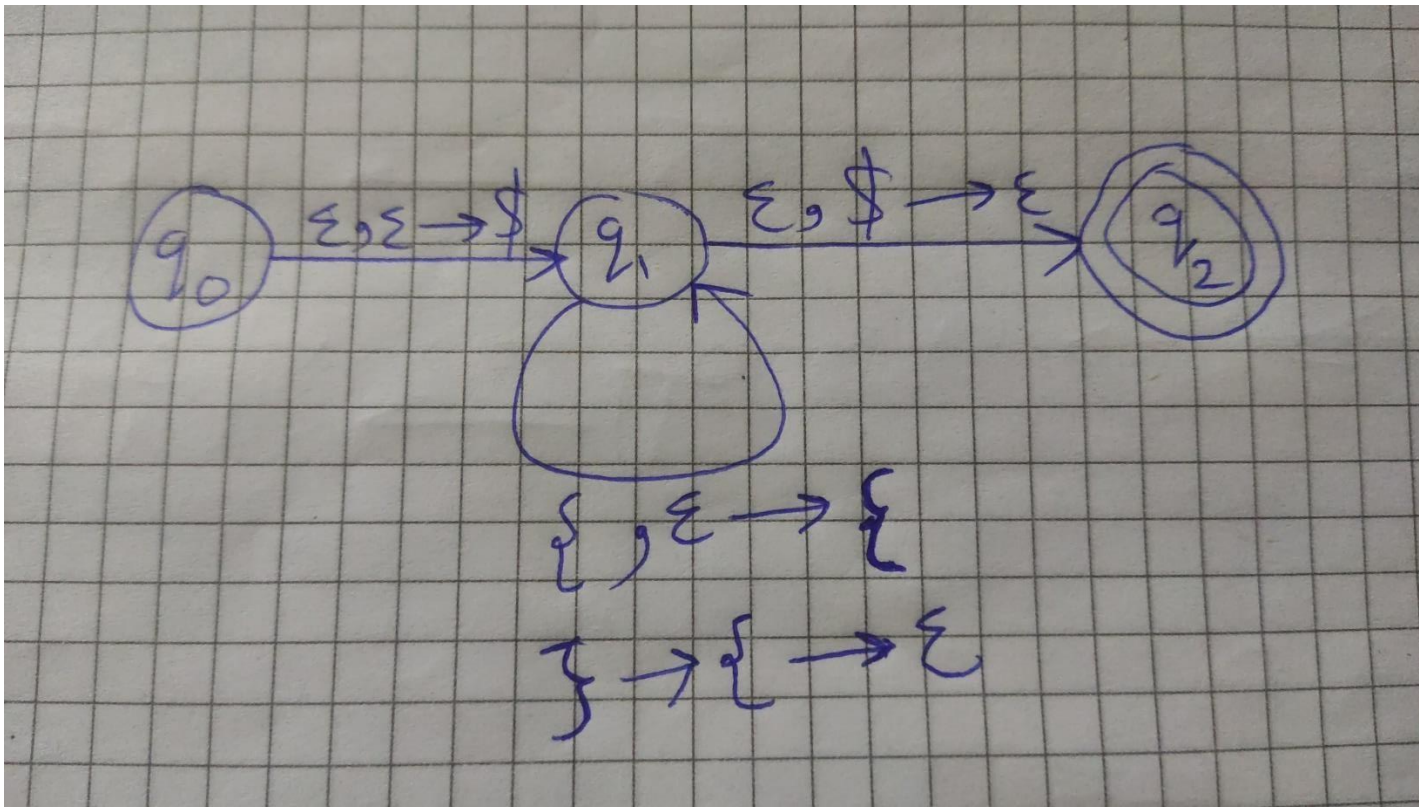
1.



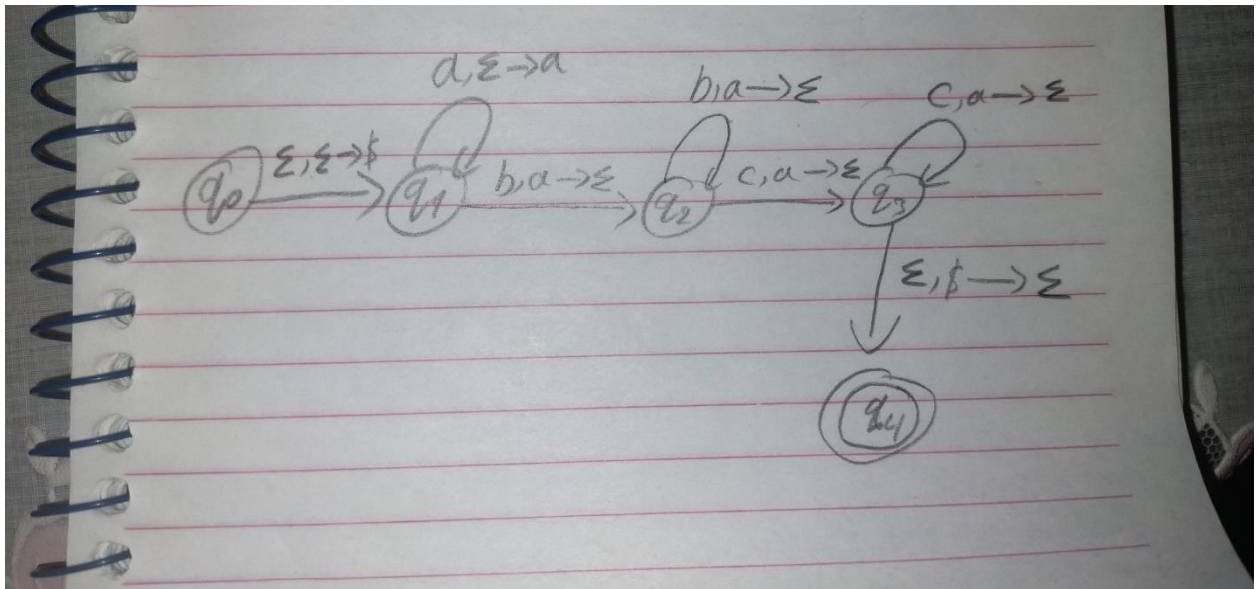
2.



3.

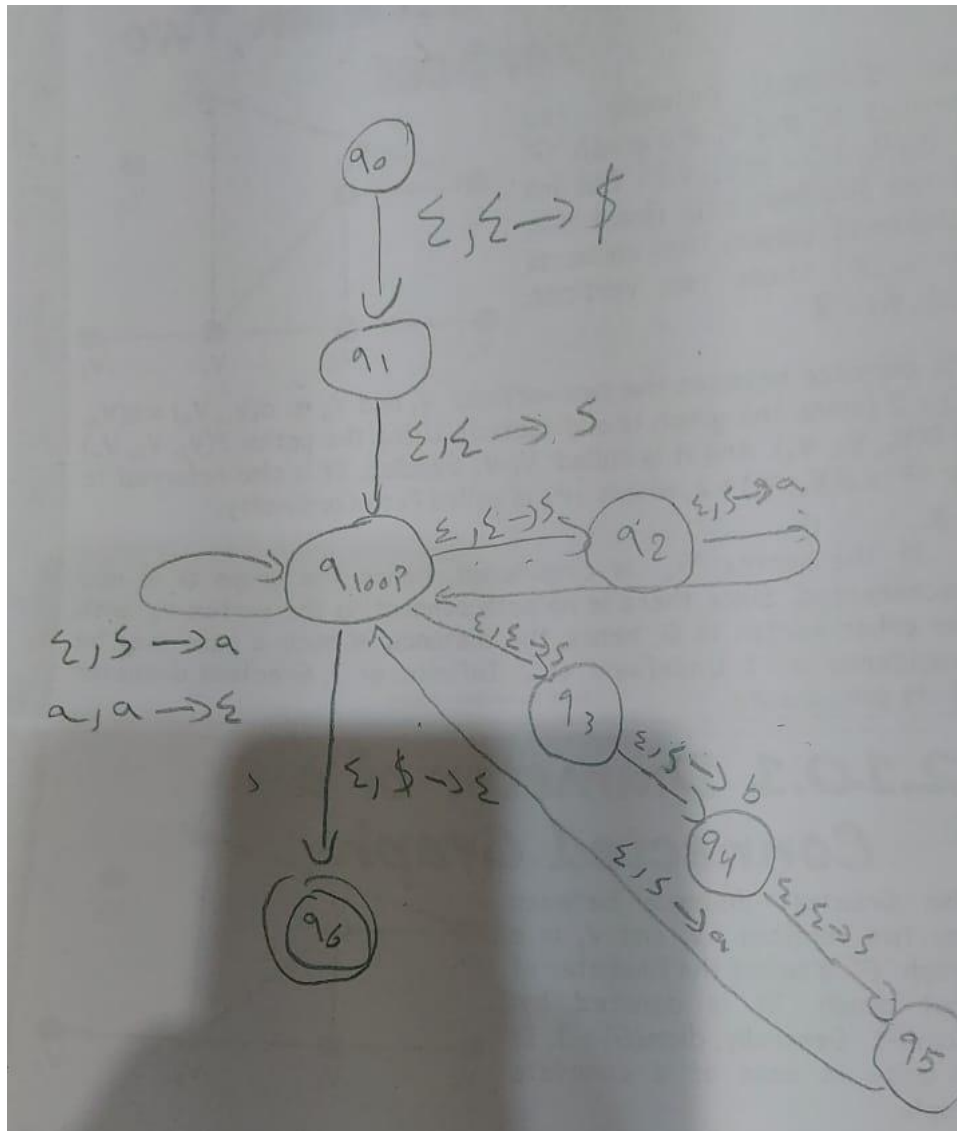


4.



Conversion from CFG to PDA:

1.



2.

