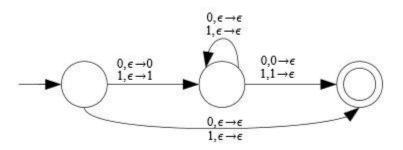
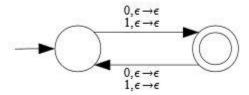
Selected Solutions to the PDA Problems Based on Section 2.2

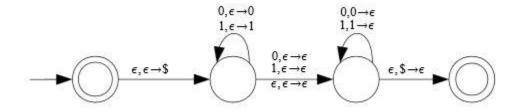
• 2.4(b) w starts and ends with the same symbol



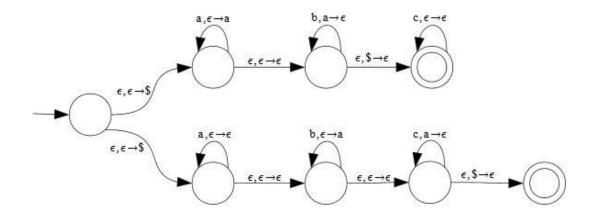
• 2.4 (c) the length of w is odd



• 2.4(e) w = w^R



2.9 A = $\{a^i b^j c^k \mid i = j \text{ or } j = k \text{ where } I, j, k \ge 0\}$



- Problem shown in the picture.
- (e) $E = \{ a^i b^j c^k \mid i, j, k \ge 0 \text{ and } i + j = k \}$

Answer:

$$a, \varepsilon \to x \qquad b, \varepsilon \to x \qquad c, x \to \varepsilon$$

$$e, \varepsilon \to \$ \qquad e, \varepsilon \to \varepsilon \qquad q_3 \qquad \varepsilon, \varepsilon \to \varepsilon \qquad q_4 \qquad \varepsilon, \$ \to \varepsilon \qquad q_5$$

- Problem shown in the picture.
- (f) $F = \{ a^{2n}b^{3n} \mid n \ge 0 \}$

Answer:

