Annex

Karnaugh's maps for Task 1

For the Moore's state machine implementation:

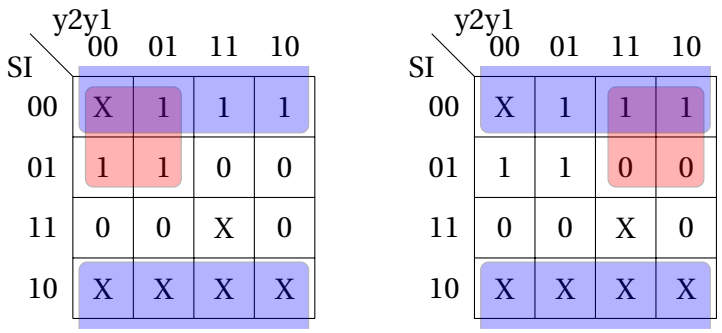

Figure 1: Maps for Y_2 (left) and Y_1 (right) functions.

Where from the left table $Y_2 = \overline{I} + \overline{S} \cdot \overline{y_2}$, and from the right $Y_1 = \overline{I} + \overline{S} \cdot y_2$. And for the outputs, $B_1 = y_2$ and $B_2 = y_1$.

For the Mealy's state machine implementation:

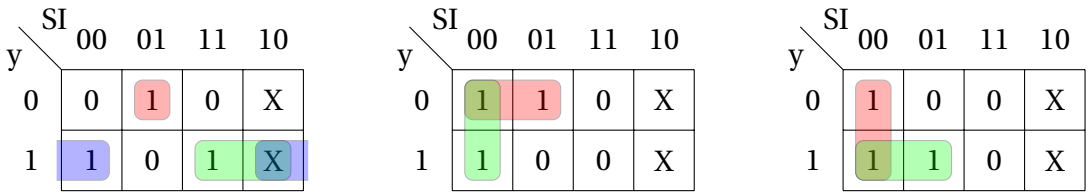

Figure 2: Maps for Y (left), B_1 (center) and B_2 (right) functions.

Where from the left table $Y = \overline{y} \cdot \overline{S} \cdot I + y \cdot \overline{I} + y \cdot S$. From the center table $B_1 = \overline{y} \cdot \overline{S} + \overline{S} \cdot \overline{I}$, and from the right table $B_2 = \overline{S} \cdot \overline{I} + y \cdot \overline{S}$.