

synchronous counter

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1. A 2-bit synchronous counter using two J-K flip flops is shown. The expressions for the inputs to the J-K flip flops are also shown in the figure. The output sequence of the counter starting from $Q_1Q_2 = 00$ is

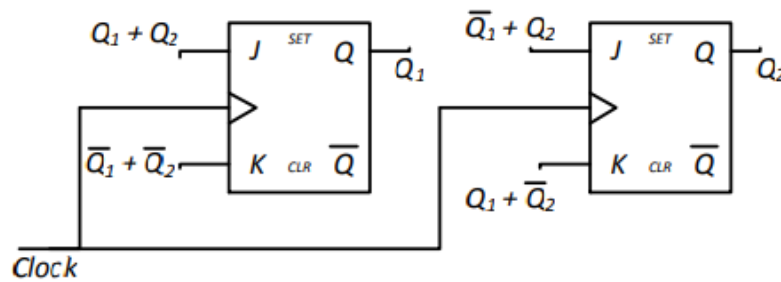


Figure 1: 2-bit synchronous counter

- (a) $00 \rightarrow 11 \rightarrow 10 \rightarrow 01 \rightarrow 00 \dots$
- (b) $00 \rightarrow 01 \rightarrow 10 \rightarrow 11 \rightarrow 00 \dots$
- (c) $00 \rightarrow 01 \rightarrow 11 \rightarrow 10 \rightarrow 00 \dots$
- (d) $00 \rightarrow 10 \rightarrow 11 \rightarrow 01 \rightarrow 00 \dots$