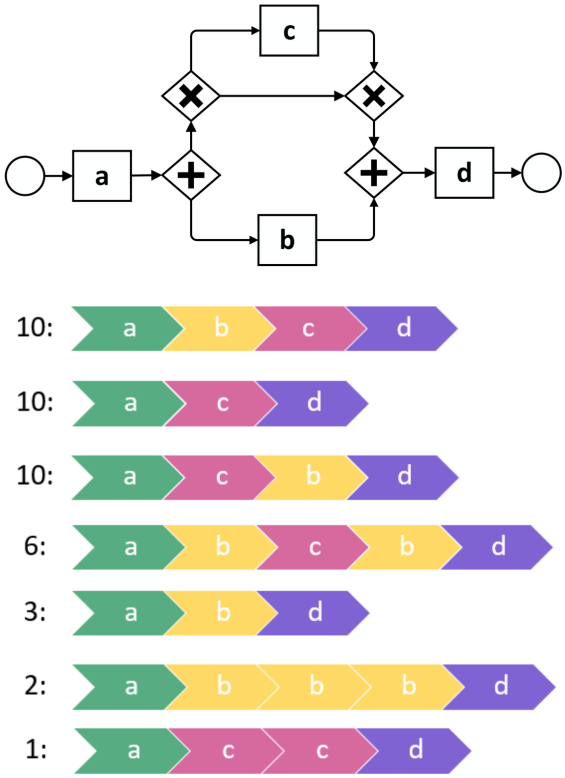
Recap 3.1.1: Introduction to Conformance Checking

1. **Consider the following BPMN model and event log. How many cases are conforming to the model?.**

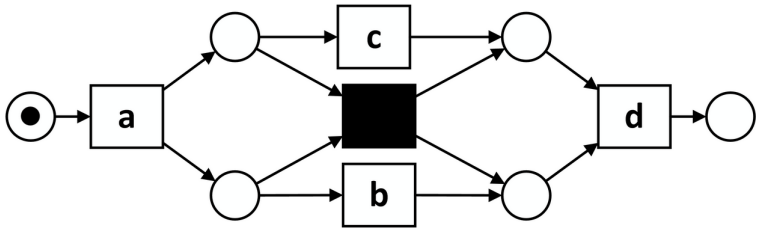


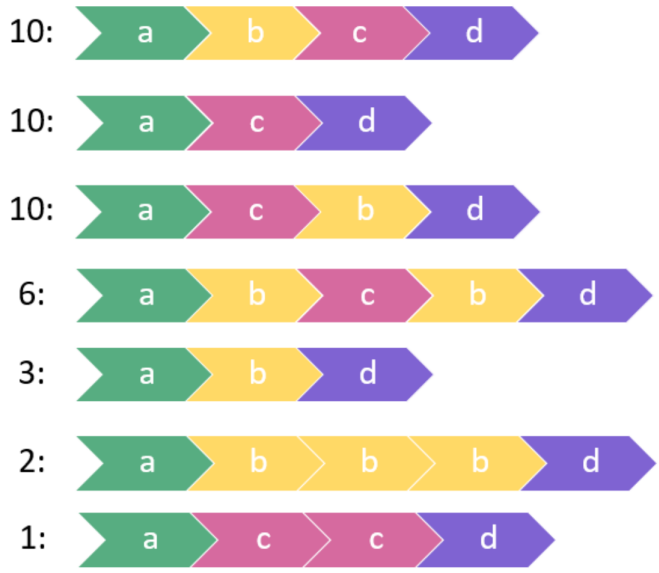
Cases: 23

The BPMN model starts with activity (a) followed by an AND (+). It means the process must complete both tasks ((b) or XOR(c, skip)) and then can execute (d). So, the variants showed:

1. $\langle a, b, c, d \rangle \rightarrow$ Both branches are complete, conforming. (10)
2. $\langle a, c, d \rangle \rightarrow$ (b) is missing, not conforming.
3. $\langle a, c, b, d \rangle \rightarrow$ Both branches are complete, conforming. (10)
4. $\langle a, b, c, b, d \rangle \rightarrow$ (b) cannot be repeated, not conforming.
5. $\langle a, b, d \rangle \rightarrow$ Both branches are complete, conforming. (3)
6. $\langle a, b, b, b, d \rangle \rightarrow$ (b) cannot be repeated, not conforming.
7. $\langle a, c, c, d \rangle \rightarrow$ (b) is missing and (c) cannot be repeated, not conforming.

8. **Consider the following Petri net model and event log. How many cases are conforming to the model?**





Cases: 20

The Petri model starts with a token that allows (a). When (a) happens, it consumes the token from the start and produces two tokens: one at the top, one at the bottom. For the top path, a choice appears between (c) or a XOR (black filled square); whichever happens generates a token (but the XOR requires two tokens to occur). For the bottom path, a choice appears between (b) or a XOR (black filled square); whichever happens generates a token (but the XOR requires two tokens to occur). (d) occurs once there are two tokens available, one from the top path, one from the bottom path.

1. $\langle a, b, c, d \rangle \rightarrow$ Both (b) and (c) are complete, conforming. (10)
2. $\langle a, c, d \rangle \rightarrow$ (b) is missing, not conforming.
3. $\langle a, c, b, d \rangle \rightarrow$ Both branches are complete, conforming. (10)
4. $\langle a, b, c, b, d \rangle \rightarrow$ (b) cannot be repeated, not conforming.
5. $\langle a, b, d \rangle \rightarrow$ (c) is missing and the skip cannot occur, not conforming.
6. $\langle a, b, b, b, d \rangle \rightarrow$ (b) cannot be repeated, not conforming.
7. $\langle a, c, c, d \rangle \rightarrow$ (c) cannot be repeated, not conforming.