How to determine the color of component j in state q?

The state q is the successor state of state p.

 $\bullet\,$ If p contains no component with color 2 $(0\,|\,1\,|\,01)$

The color of the predecessor component of $q(j)$ is	non-accepting	accepting
0	0	2
1	2	2

 $\bullet\,$ If p contains one or more components with color 2 $(2\,|\,02\,|\,12\,|\,012)$

The color of the predecessor component of $q(j)$ is	non-accepting	accepting
0	0	1
1	1	1
2	2	2

How to determine the color of component j in state q?

Equivalent alternative, as discussed at the meeting.

The state q is the successor state of state p.

• If p contains no component with color 2 or 1 (0)

The color of the predecessor component of $q(j)$ is	non-accepting	accepting
0	0	2

• If p contains at least one component with color 1, but none with color 2 (1 | 01)

The color of the predecessor component of $q(j)$ is	non-accepting	accepting
0	0	1
1	1	2

Note: that a state contains color 1 but not color 2 can only happen if a run through a color 2 component previously died (color 2 disappeared).

• If p contains one or more components with color 2 $(2 \mid 02 \mid 12 \mid 012)$

The color of the predecessor component of $q(j)$ is	non-accepting	accepting
0	0	1
1	1	1
2	2	2