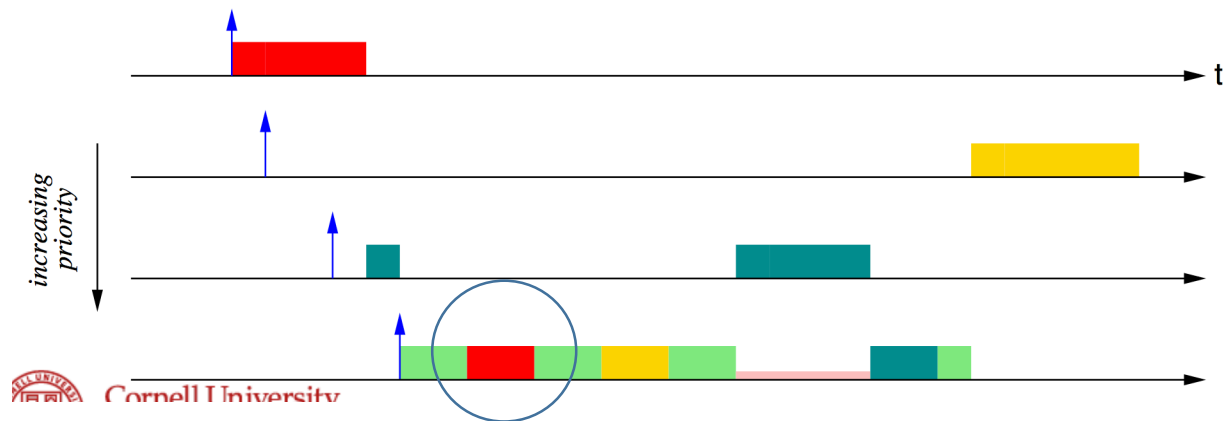


2.



The error occurs in the circled region. Note, that each lock is assigned the same ceiling, in this example 3, as process 4 uses all three locks and has priority 3. Hence, the priority of the red CS in process 4 is no greater than the priority of the blue CS in process 3, as $p_4 > \max\{C(l_{\text{blue}}) \mid l_{\text{blue}} \text{ is locked by tasks } \neq \tau_4\}$. Thus, red cannot pre-empt blue, so in process 4, after it finishes its first green section, P3 will then be allowed to finish its blue CS, then it will switch back to P4 to continue processing.