

12) Most imp limitation of user-level thread is that you don't have to go to kernel for every switch (low cost). Scheduling algo custom to app. Greater portability. (1 user thread = 1 kernel thread)
(N user thread on 1 kernel thread) . (N user threads on 'M' kernel threads).

13) (Fish feed) (you & your brother) \Rightarrow first you go to your mom ask if the fish have been feed. if not then \rightarrow Get food \rightarrow feed fish \rightarrow Tell mom, but when you ask mom and Get food in that time if your brother come ask mom if fish have been feed, and obviously at that time mom said no, then your brother also feed the fish. Then both you and brother feed the fish and fish dies. This is the race condition that while you are feeding fish at same time your brother come and feed fish (race condition).

14) we have to synchronise threads to avoid race condition. Make locks if you come first you get the lock enter into room and feed the fish and come back and give lock to mom and tell fish is feed. Then your brother not go.

15) if (s=5)
if (s>0) { s=s-1 } else { sleep }
i) running ii) running iii) running iv) running v) running
vi) sleep vii) sleep
