3.2 Lecture Summary

3.2 Actor Examples

Lecture Summary: In this lecture, we further studied the *Actor Model* through two simple examples of using actors to implement well-known concurrent programming patterns. The *PrintActor* in our first example processes simple String messages by printing them. If an `EXIT` message is sent, then the PrintActor completes its current computation and exits. As a reminder, we assume that messages sent between the same pair of actors preserve the order in which they are sent.

In the second example, we created an *actor pipeline*, in which one actor checks the incoming messages and only forwards the ones that are in lower case. The second actor processes the lowercase messages and only forwards the ones that are of even length. This example illustrates the power of the actor model, as this concurrent system would be much more difficult to implement using threads, for example, since much care would have to be taken on how to implement a shared mailbox for correct and efficient processing by parallel threads.

Optional Reading:

1. Wikipedia article on Pipeline Parallelism.

Mark as completed