CIS 525 Software Development of Parallel and Distributed Systems   Fall 2008

Lecture 7: Tuesday, September 23, 2008

1. Verification of system properties using place invariants – sender-receiver problem, continued.
2. Verification of system properties using place invariants – reader-writer problem for OS.
3. Case Study: Justice Department modeling by Petri nets – transition invariants and property of reversibility.
4. Definitions of place and transition invariants; computing place and transition invariants; basic properties of Petri nets with known place invariants.
5. Implementing Petri net models directly from the model – hardware and software implementations.

Lecture 8: Thursday, September 25, 2008

1. Sender-receiver – Colored Petri net model
2. Producer-consumer – Colored Petri net model.
3. Chinese Philosophers – C/E and Colored Petri net model.
4. Process nets for Concurrent Vending Machine.

Textbook relevant sections:

Material discussed in lectures 1-8 covers, roughly speaking, pages 1-77 of the textbook with some extensions in terms of examples and focus.