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3C03 Concurrency
Tutorial Session 3 - Work Sheet

This tutorial session will give you practical experience with safety analysis and property specification.

Exercise 1:
A small country road goes over a wooden bridge that connects two shores of a creek. The bridge is rather narrow and cars can only go north-bound or south bound. Given that it is constructed out of wood, the bridge can only carry five cars at a time. Model the bridge in FSP.

Exercise 2:
Demonstrate that your bridge model is safe. To do so, formulate the following safety properties in FSP:
• The bridge does not allow more than five cars onto the bridge at any one time
• Cars are either going south or north but there are never two cars on the bridge that go in opposite direction.

Exercise 3:
How do you use the safety properties in an implementation of the bridge model?