

# Development of Distributed Algorithm Simulator



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**Keywords** distributed computing, distributed algorithm, fault tolerance, mutual exclusion

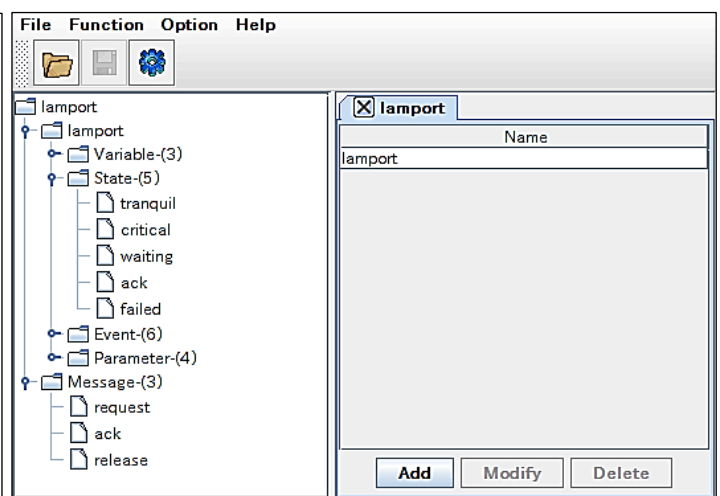
**Technical Support Skills**

- Investigation, design and analysis of data structures and algorithms
- How to use Linux
- Discrete mathematics

## Research Contents Distributed Algorithm Simulator using Interleaving Computation Model

### How to operate

- (1) Input system model information (right)
  - \* variables
  - \* states
  - \* events
  - \* parameters
  - \* messages
- (2) Output skeleton codes (Java)
- (3) Input distributed algorithms (Java)
- (4) Build
- (5) Simulate distributed algorithms (below)



Simulation History Auto Help

# of messages : 22

lamport								
	P0	P1	P2	P3	P4	P5	P6	P7
State	critical	tranquil	tranquil	ack	waiting	tranquil	tranquil	tranquil
Send Buffer	0 messages	0 messages	0 messages	0 messages	0 messages	0 messages	0 messages	0 messages
Receive Bu...	0 messages	1 messages	1 messages	0 messages	1 messages	1 messages	1 messages	1 messages
Event	1 events	2 events	2 events	1 events	1 events	2 events	2 events	2 events
v	[11,4,4,4,...	[2,4,0,0,0...	[2,0,4,0,0...	[2,0,0,5,2...	[2,0,0,0,4'...	[2,0,0,0,0,...	[2,0,0,0,0,...	[2,0,0,0,0,...
q	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...	[2, ∞, ∞, ∞, ...
health	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Available Facilities and Equipment

Ubuntu Linux (Free Software)	