Automatic Phase Detection 
from Execution Traces for Software Testing

All test scenarios include common features such as LOGIN and LOGOUT.

We propose a phase detection approach to dividing an execution trace to feature-level phases.

Our approach enables testers and maintainers to focus on only interesting features in execution traces!

We are trying to ...

• Compare and Classify Phases
• Map Phases to Features
• Detect Crosscutting Concerns in various Features

Dividing an Execution Trace to Phases

A LRU cache captures the working set of objects for each phase; the cache is frequently updated if a new phase is beginning.

The beginning of a phase is a method call event.

Current Status:
We have detected phases in industrial systems.

• Four scenarios for a system.
• Five different implementation of the same specification.