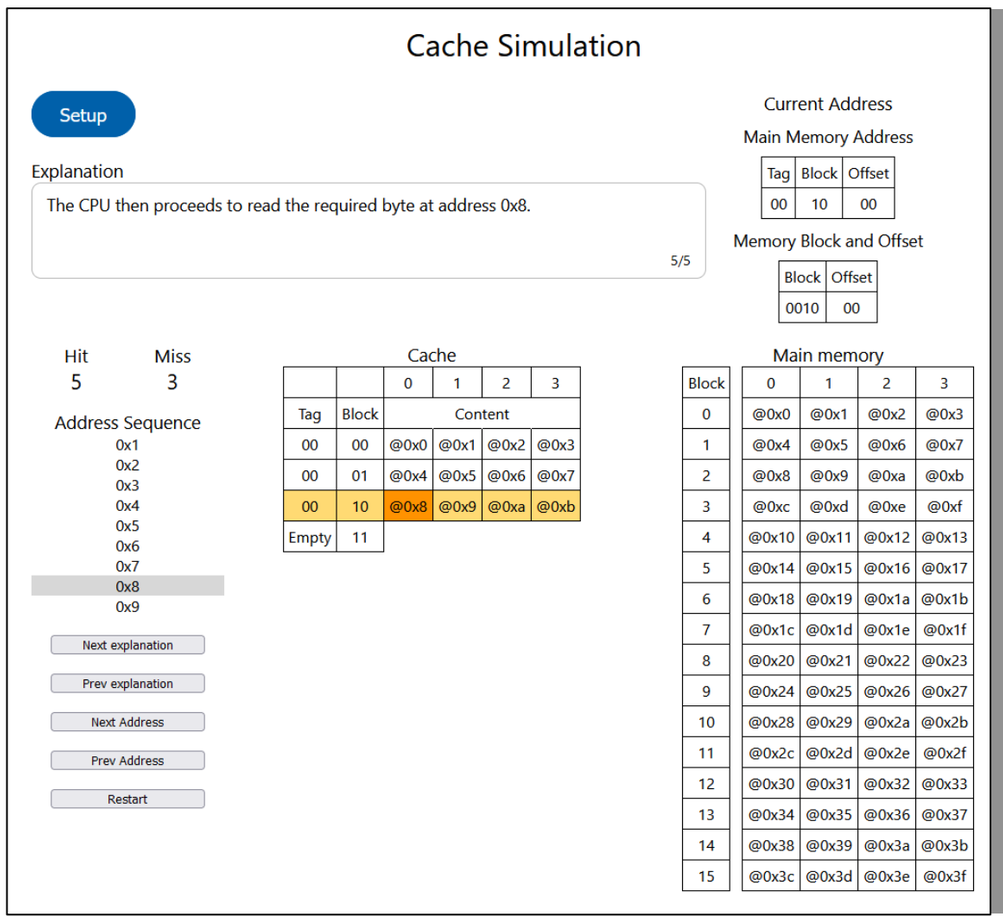
NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

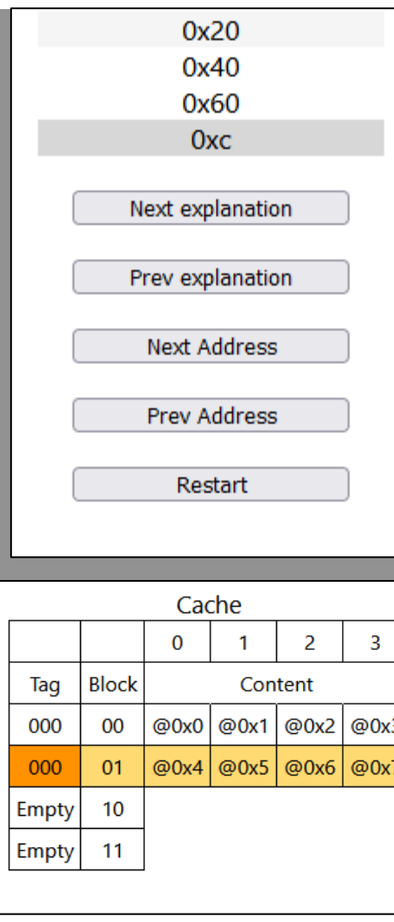
School of Computer Science and Engineering
College of Engineering

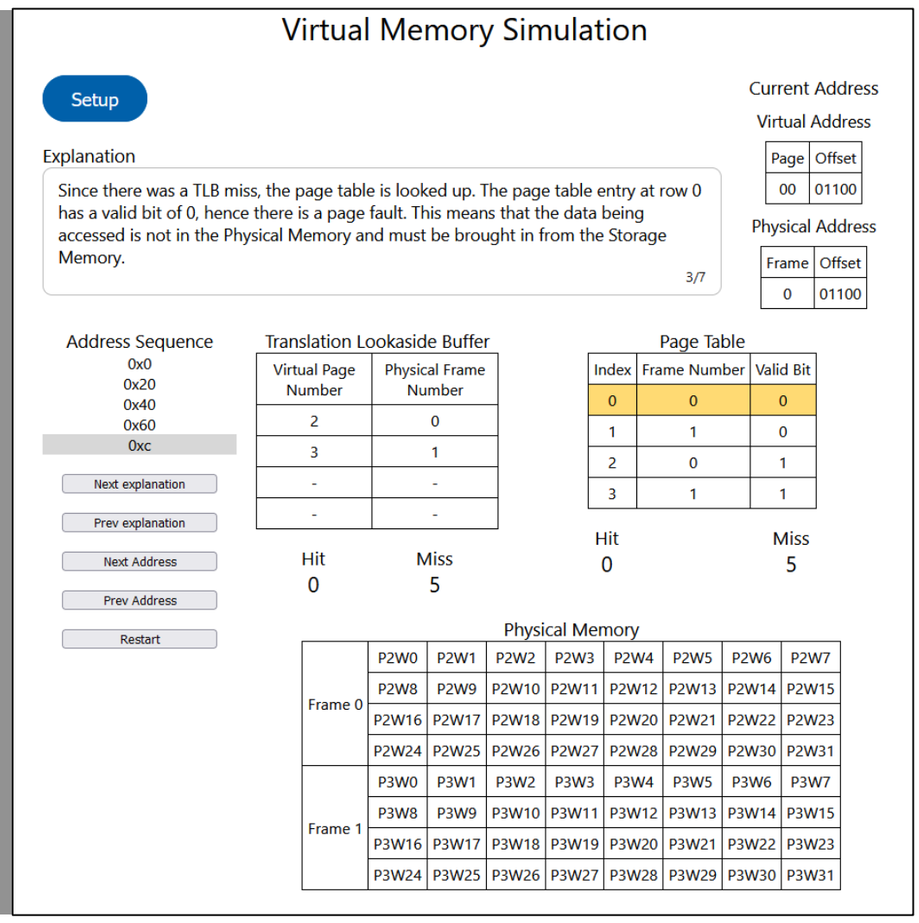
Cache & Virtual Memory Simulator

Web-app simulator for educational purposes

Student: Wai Yar Aung Supervisor: Oh Hong Lye







Project Objectives:

Web app to simulate cache and virtual memory management operation and performance analysis. The application features simulation of Direct-Mapped, Set Associative and Fully Associative Mapping Scheme for Cache. Address sequence can be entered manually or via a script file. Memory structures are fully configurable. Cache Memory Performance Analysis can also be simulated over a large real workload dataset to be compared amongst different configurations.

Additional Features:

- Single stepping (forward and backward) feature
- Virtual Memory Demand Paging and TLB integration
- In-step text-based commentary

Analysis page