con [cache_count] [block_size] [policy_num]

Configure System Parameters

- Set Configurations
- Perform Format Check for Policy Number
- Mark Cache Count, Block Size, Policy Number as Ready
- *Warning: Policy number MUST be EITHER 1 OR 2*

Parameters

1. **[cache_count]** Number of Cache Layers in this System
2. **[block_size]** Number of Bytes that Each DataBlock can hold
3. **[policy_num]** Policy Number this System should Implement

scd [cache_level] [total_size] [set_assoc]

Set Cache Dimensions

- Set Cache Size and Set Assoc
- Perform Bound Checks for Cache Level
- *Warning: Function will Mark Ready in Cache, not System*

Parameters

1. **[cache_level]** The level(index) of cache with lowest being 1
2. **[total_size]** Total Number of Bytes this Cache needs to Store
3. **[set_assoc]** Number of DataBlock for a Each Given Index

scl [cache_level] [latency]

Set Cache Latency

- Set Cache Latency
- Perform Bound Checks for Cache Level
- *Warning: Function will Mark Ready in Cache, not System*

Parameters

1. **[cache_level]** The level(index) of cache with lowest being 1
2. **[latency]** Number of Clock Cycles to Complete Read for this Cache

sml [latency]

Set Memory Latency

- Set Memory Latency
- Mark Memory Latency as Ready
- *Warning: This Function does NOT Set Memory Latency in Cache Array*

Parameters

1. **[latency]** Number of Clock Cycles to Complete Read from Memory

inc [cache_level]

Initialize Cache

- Initialize Cache
- Perform Bound Checks for Cache Level

Parameters

1. **[cache_level]** The level(index) of cache with lowest being 1

tre [address] [arrive_time]

Task Read

- Task Read Address at Time

Parameters

1. **[address]** Raw 32-bit Address to be Read
2. **[arrive_time]** Clock Cycle at when This Specific Task is Scheduled

twr [address] [arrive_time]

Task Write

- Task Write Address at Time

Parameters

1. **[address]** Raw 32-bit Address to be Written

2. **[arrive_time]** Clock Cycle at when This Specific Task is Schedule

ins

- Initialize System

No Parameters

pcr [cache_level]

- Print Cache Hit/Miss Counts and Rates to Report File
- Perform Bound Checks for Cache Level

Parameters

1. **[cache_level]** The level(index) of cache with lowest being 1

pci [cache_level]

Print Cache Image

- Print the Content of Cache to Report File
- Perform Bound Checks for Cache Level

Parameters

1. **[cache_level]** The level(index) of cache with lowest being 1

hat

Halt Program

- Return False so that Core will Stop

No Parameters