

Figure 1. Initially Filling the Cache

Data needed to complete program execution:

10 24 5 1 61 57 14 38 54 86

Access Memory Region:

Input Thread ID:

Choose eviction/replcaement policy (current: LRU)

☒ LRU ☐ Random (RAN)

The Current Cache:

Line Number: 0, Age: 1	0	1	2	3
Line Number: 1, Age: 2	4	5	6	7
Line Number: 2, Age: 3	8	9	10	11
Line Number: 3, Age: 4	12	13	14	15

Most Recent (at top of list):

Cache Line 3 caused a cold miss!
 Cache Line 2 caused a cold miss!
 Cache Line 1 caused a cold miss!
 Cache Line 0 caused a cold miss!

Figure 2. Accessing a number within the cache, but also selecting data needed to complete a program

Data needed to complete program execution:

10 24 5 1 61 57 14 38 54 86

Access Memory Region:

Input Thread ID:

Choose eviction/replcaement policy (current: LRU)

☒ LRU ☐ Random (RAN)

The Current Cache:

Line Number: 0, Age: 1	0	1	2	3
Line Number: 1, Age: 2	4	5	6	7
Line Number: 2, Age: 5	8	9	10	11
Line Number: 3, Age: 4	12	13	14	15

Most Recent (at top of list):

Cache was hit by the cache line #2!
 Cache Line 3 caused a cold miss!
 Cache Line 2 caused a cold miss!
 Cache Line 1 caused a cold miss!
 Cache Line 0 caused a cold miss!

Figure 3. LRU eviction/replacement policy taking effect.

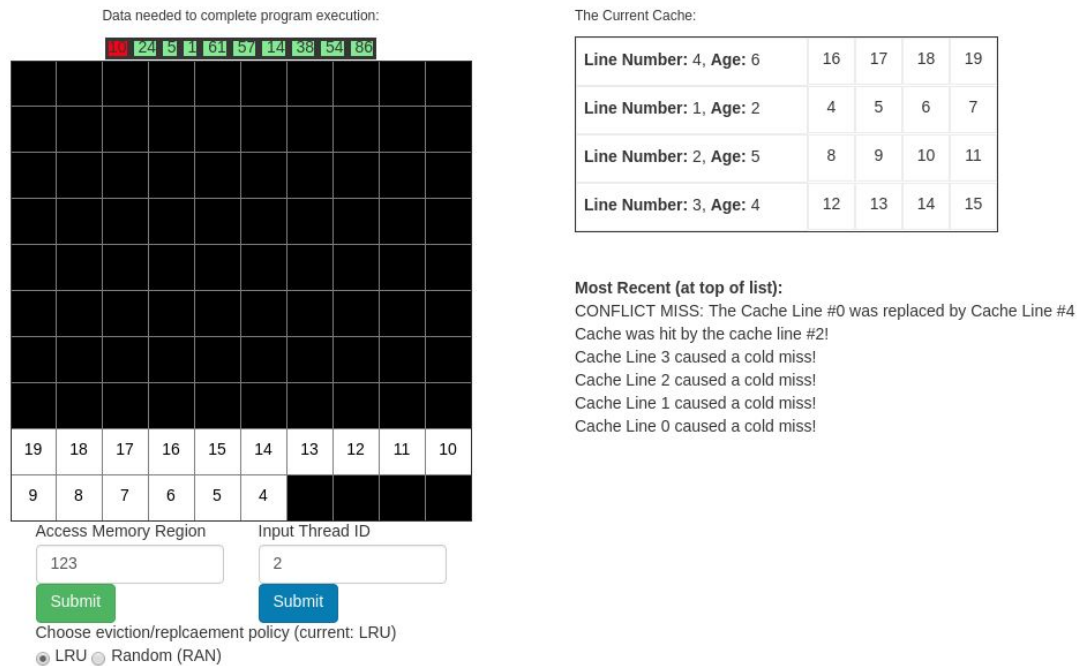


Figure 4. Changed to Random eviction/replacement policy and taking effect.

