CS354 p4B Worksheet: For given cach config, determine hits (H) and misses (M) for each instruction in the trace

csim-ref [-hv] -s <s> -E <E> -b <b> -t <tracefile>
-h: Optional help flag that prints usage info
-v: Optional verbose flag that displays trace info
-s <s>: Number of s bits for set index
-E <E>: number of lines per set (associativity)
-b <b>: Number of b bits for block offsets
-t <tracefile>: Name of the valgrind trace to replay

./csim -s 4 -E 2 -b 4 -t traces/trace1
operation address,size
 L 0,1
 L 1,1
 L 2,1
 L 3,1
 S 4,1
 L 5,1
 S 6,1
 L 7,1
 S 8,1
 L 9,1
 S a,1
 L b,1
 S c,1
 L d,1
 S e,1
 M f,1

./csim -s 4 -E 1 -b 4 -t traces/trace2
 L 10,1
 M 20,1
 L 22,1
 S 18,1
 L 110,1
 L 210,1
 M 12,1

./csim -s 2 -E 3 -b 3 -t traces/trace3
 L 10,4
 S 18,4
 L 20,4
 S 28,4
 S 50,4

./csim -s 3 -E 4 -b 5 -t traces/trace4 (this only partical list of trace4)
 S 00600aa0,1
I  004005b6,5
 S 7ff000398,8
I  0040051e,1
 S 7ff000390,8
I  0040051f,3
I  00400522,4
 S 7ff000378,8
I  00400526,4
 S 7ff000370,8
I  0040052a,7
 S 7ff000384,4
I  00400531,2
I  00400581,4
 L 7ff000384,4

Draw memory diagram of cache with S=4 and E=2.
Label memory type of each mem location: cache_line_t, cache_set_t, cache_t

| cache (cache_t) | | |
|---|---|---|
| | Set 0 cache_set_t | Set 1 cache_set_t |
| Line 0 | cache_line_t | cache_line_t |
| Line 1 | cache_line_t | cache_line_t |