

```

for thread_group (by, bx) in cross(64, 64):
    for thread_item (ty, tx) in cross(2, 2):
        local CL[8][8] = 0
        shared AS[2][8], BS[2][8]
        for k in range(1024):
            for i in range(4):
                AS[ty][i*4+tx] = A[k][by*64+ty*8+i*4+tx]
            for each i in 0..4:
                BS[ty][i*4+tx] = B[k][bx*64+ty*8+i*4+tx]
            memory_barrier_among_threads()
            for yi in range(8):
                for xi in range(8):
                    CL[yi][xi] += AS[yi] * BS[xi]
            for yi in range(8):
                for xi in range(8):
                    C[yo*8+yi][xo*8+xi] = CL[yi][xi]

```

All threads cooperatively
load AS and BS in different
parallel patterns



Barrier inserted
automatically
by compiler