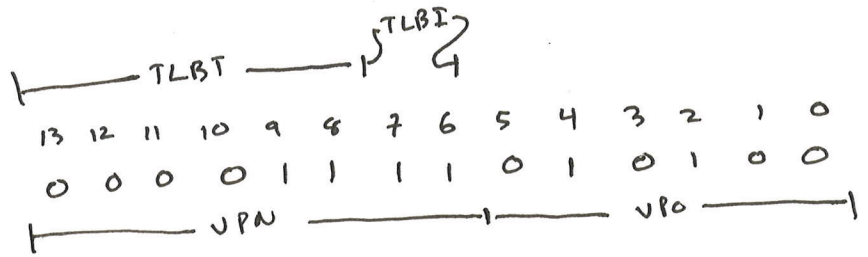
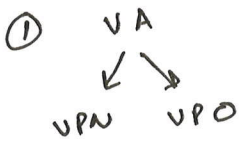
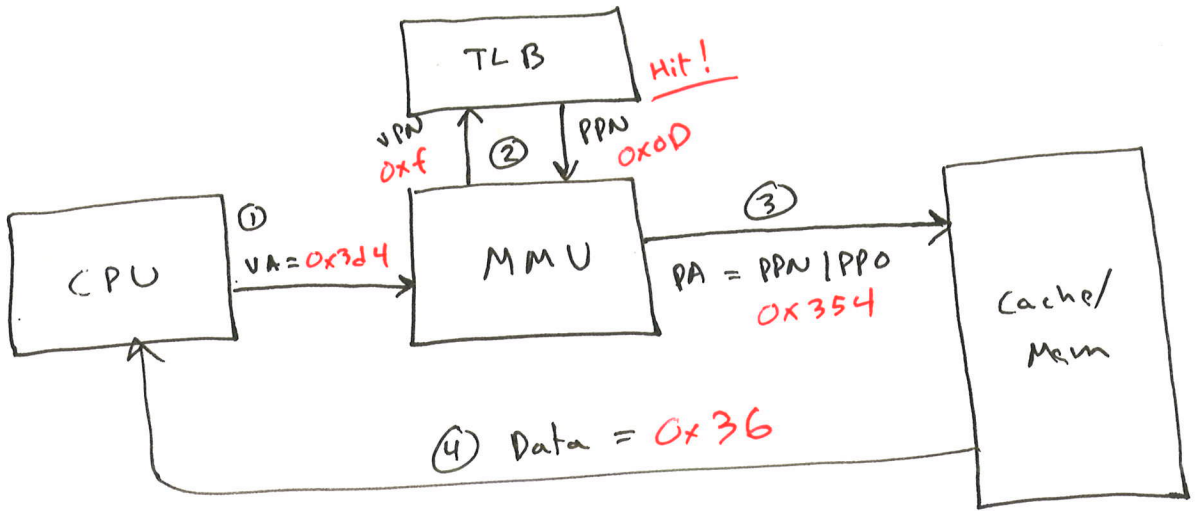
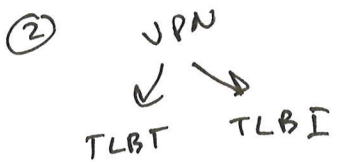


TLB hit
Cache hit

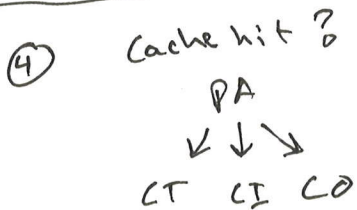
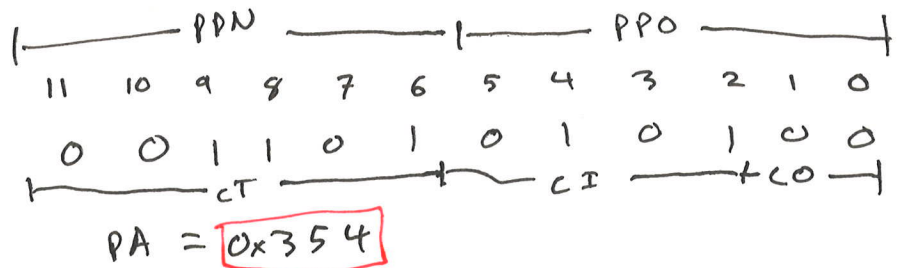
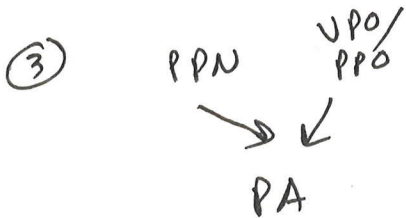


VPN = 0x0F VPO = 0x14

TLB hit?

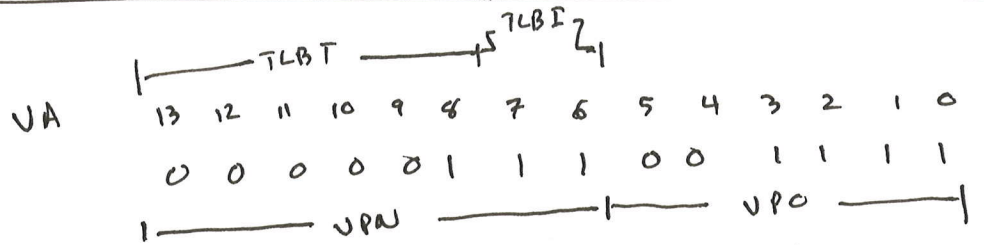
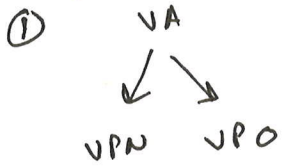
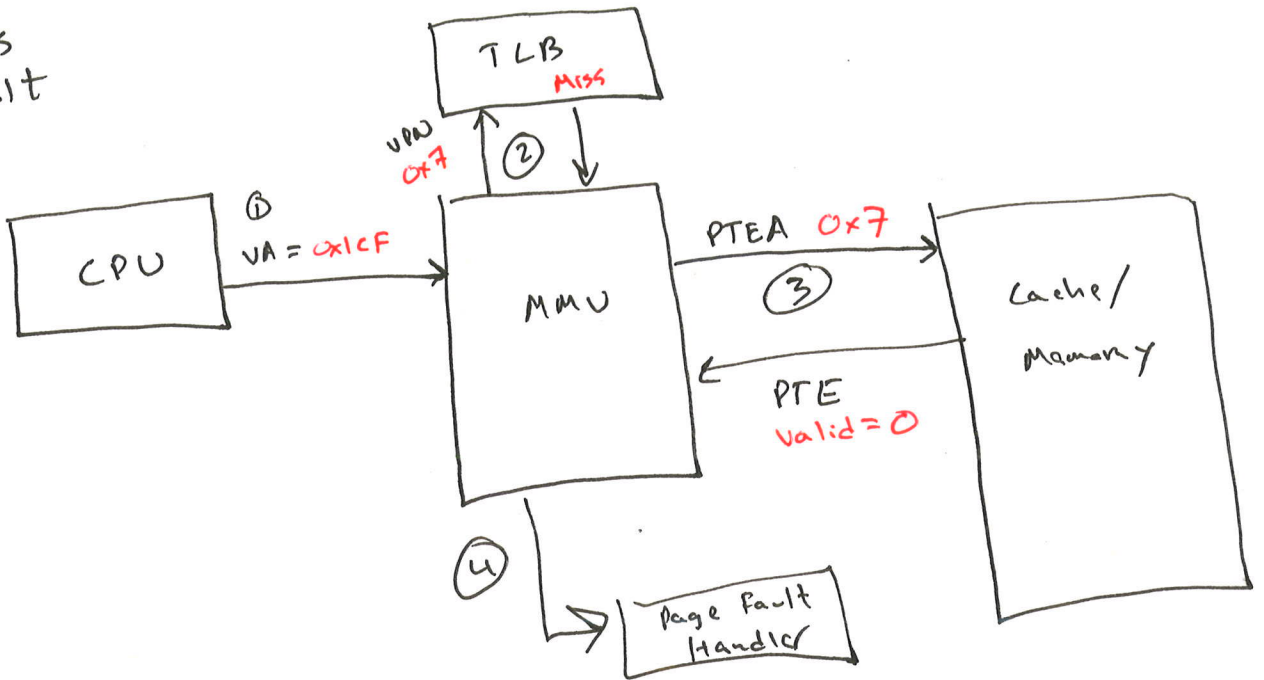


VPN = 0x0F
 TLBT = 0x3
 TLBI = 0x3
 TLB Hit PPN = 0x0D

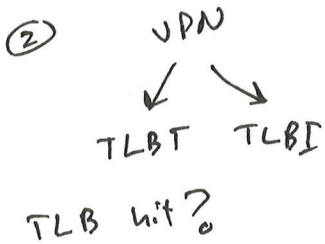


CT = 0xD
 CI = 0x5
 CO = 0x0
 Cache Hit! Data = 0x36

TLB Miss
Page Fault



VPN = 0x7 VPO = 0xF



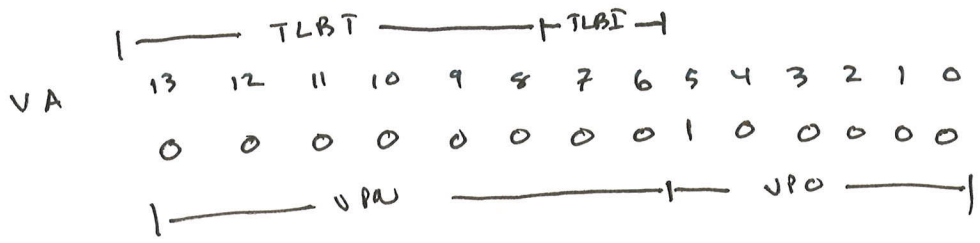
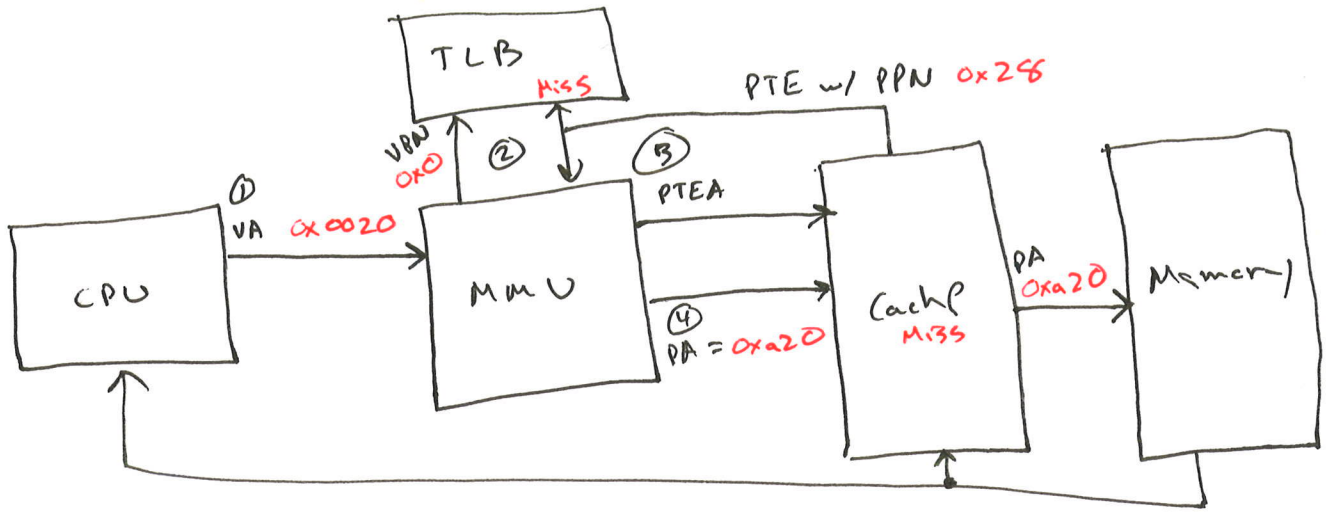
TLBT = 0x1
TLBI = 0x3

Miss!

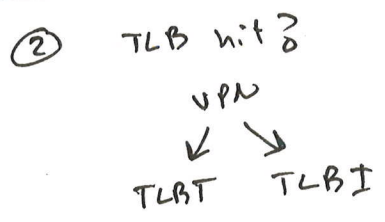
③ $PTEA = PTBR + VPN$
 ↑
 stored in process context

VPN = 0x7 Valid = 0 in PT

④ Page Fault → Kernel page fault handler



VPN = 0x0
VPO = 0x20



TLBT = 0x0
TLBI = 0x0

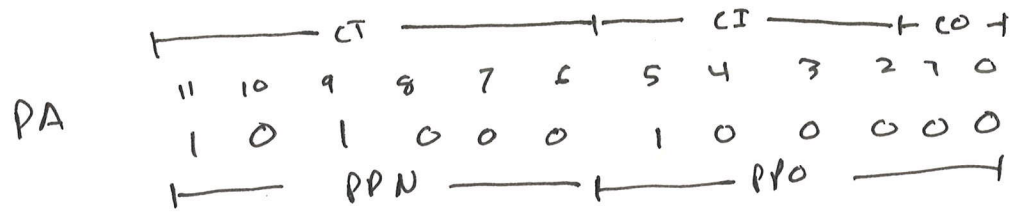
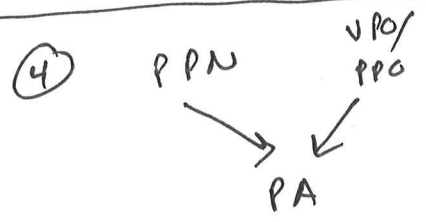
TLB miss ☹️

③ PTEA = PTR + VPN

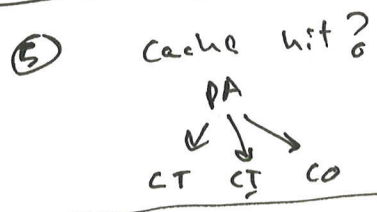
VPN = 0

VPN	PPN	Valid
00	28	1

PPN = 0x28



PA = 0xa20



CT = 0x28
CI = 0x8
CO = 0x0

cache miss

⑥