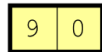


ret



Fetch  $icode:ifun \leftarrow M_1[PC]$

Decode  $valA \leftarrow R[7:rsp]$

Execute  $valE \leftarrow valA + 8$

Memory  $valM \leftarrow M_8[valP]$

Write back  $R[7:rsp] \leftarrow valE$

PC update  $PC \leftarrow valM$

cmovXX rA, rB



Fetch  $icode:ifun \leftarrow M_1[PC]$

$rA:rB \leftarrow M_1[PC+1]$

$valP \leftarrow PC+2$

Decode  $valA \leftarrow R[rA]$

Execute  $Cond \leftarrow Cond(CC, fn)$

memory

Writeback if(Cond)  $R[rB] \leftarrow valA$

PC update  $PC \leftarrow valP$

irmovq V, rB  
i → R



Fetch  $icode:ifun \leftarrow M_1[PC]$

$rA:rB \leftarrow M_1[PC+1]$

$valC \leftarrow M_8[PC+2]$

$valP \leftarrow PC+10$

Decode

Execute  $valE \leftarrow 0 + valC$

Memory

Write back  $R[rB] \leftarrow valE$

PC update  $PC \leftarrow valP$

`rmmovq rA, D(rB)`  
R → M



Fetch  $icode:ifun \leftarrow M_1[PC]$

$rA:rB \leftarrow M_1[PC+1]$

$valC \leftarrow M_8[PC+2]$

$valP \leftarrow PC + 10$

Decode  $valA \leftarrow R[rA]$

$valB \leftarrow R[rB]$

Execute  $valE \leftarrow valC + valB$

Memory  $M_8[valE] \leftarrow valA$  → memory dəyərlərini dəyişdirməyə yox

Write back → register dəyərlərini dəyişdirməyə yox

PC update  $PC \leftarrow valP$

`mrmovq D(rB), rA`  
M → R



Fetch  $icode:ifun \leftarrow M_1[PC]$

$rA:rB \leftarrow M_1[PC+1]$

$valC \leftarrow M_1[PC+2]$

$valP \leftarrow PC + 10$

Decode  $valB \leftarrow R[rB]$

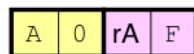
Execute  $valE \leftarrow valC + valB$

Memory  $valM \leftarrow M_8[valE]$

Write back  $R[rA] \leftarrow valM$

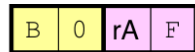
PC update  $PC \leftarrow valP$

`pushq rA`



Fetch  $icode: ifun \leftarrow M_1[PC]$   
 $ra:rb \leftarrow M_1[PC+1]$   
 $valP \leftarrow PC+2$   
 Decode  $valA \leftarrow R[ra]$   
 $valB \leftarrow R[rb]$   
 Execute  $valE \leftarrow valB - 8$   
 Memory  $M_8[valE] \leftarrow valA$   
 Write back  $R[ra] \leftarrow valE$   
 PC update  $PC \leftarrow valP$

popq rA



fetch  $icode: ifun \leftarrow M_1[PC]$   
 $ra:rb \leftarrow M_1[PC+1]$   
 $valP \leftarrow PC+2$   
 decode  $valB \leftarrow R[rb]$   
 execute  $valE \leftarrow valB + 8$   
 memory  $valM \leftarrow M_8[valB]$   
 write back  $R[ra] \leftarrow valM$   
 $R[rb] \leftarrow valE$   
 PC update  $PC \leftarrow valP$