EE463 Lab. #8

Operating System Lab. King Abdulaziz University Faculty of Engineering - ECE

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Solution

Simulator: pagetrans.py

Command: python ./pagetrans.py -a 8k -p 4k -r 128k -s 107

Solution:

Virtual Address Trace

VA 0x0000150c (decimal: 5388) →	0x0001f50c [VPN= 1]	
VA 0x00000f70 (decimal: 3952) →	Invalid	
VA 0x000009e3 (decimal: 2531) →	Invalid	
VA 0x00000468 (decimal: 1128) →	Invalid	
VA 0x00001ff5 (decimal: 8181) →	0x0001fff5 [VPN= 1]	

Simulator: pagetablesize.py

Command: python ./pagetablesize.py -v 38 -e 1 -p 16k

Solution:

Virtual Address (VA) = [Virtual Page Number (VPN) | Offset (D)]

VA (bits)	VPN (bits)	D (bits)	pte (byte)
38	24	14	1 byte

Calculate (Linear Page Table Size) and write the results in the simplest readable form (e.g. byte, KB, MB, GB, and TB)

Linear Page Table Size = 16