EE463 Lab. #8

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

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Name: Khaled Dahhasi Id: 1935129

Solution

Simulator: pagetrans.py

Command: python ./pagetrans.py -a 8k -p 1k -r 64k -s 105

Solution:

Virtual Address Trace

VA 0x00000568 (decimal: 1384) →	RA 0xF168 [VPN= 1]
VA 0x00000dc3 (decimal: 3523) →	RA 0x55C3 [VPN=3]
VA 0x00000c5d (decimal: 3165) →	RA 0x545D [VPN=3]
VA 0x00000ebb (decimal: 3771) →	RA 0x56BB [VPN= 3]
VA 0x00001c32 (decimal: 7218) →	RA 0x5832 [VPN= 7]

Simulator: pagetablesize.py

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

Solution:

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

VA (bits)	VPN (bits)	D (bits)	pte (byte)
38	18	20	16

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 = 4194 Kilobyte