EE463
Operating System Lab.
King Abdulaziz University
Faculty of Engineering - ECE

Lab. #8

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Solution

Simulator: pagetrans.py
Command: python ./pagetrans.py -a 16k -p 4k -r 128k -s 105
Solution:
Virtual Address Trace

VA 0x00000a7b (decimal: 2683) →	**RA 0x0000ba7b [VPN= 0]**
VA 0x0000164a (decimal: 5706) →	**RA 0x0001e64a [VPN= 1]**
VA 0x00003014 (decimal: 12308) →	**RA 0x0000a014 [VPN= 3]**
VA 0x00000971 (decimal: 2417) →	**RA 0x0000b971 [VPN= 0]**
VA 0x00002a31 (decimal: 10801) →	**Invalid [VPN= 2]**

Simulator: pagetablesize.py
Command: python ./pagetablesize.py -v 38 -e 8 -p 8k
Solution:
Virtual Address (VA) = [Virtual Page Number (VPN) | Offset (D)]

VA (bits)	VPN (bits)	D (bits)	pte (byte)
38	**25**	**13**	**8**

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 = 268,435,456 Bytes = 262,144 KB = 256 MB