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 4k -p 2k -r 128k -s 102**

Solution:
Virtual Address Trace

VA 0x00000b66 (decimal: 2918) →	**RA 0x00005366 [VPN= 1]**
VA 0x000009b9 (decimal: 2489) →	**RA 0x000051b9 [VPN= 1]**
VA 0x00000626(decimal: 1574) →	**Not valid**
VA 0x000009e1 (decimal: 2529) →	**RA 0x000051e1 [VPN= 1]**
VA 0x0000090f (decimal: 2319) →	**RA 0x0000510f [VPN= 1]**

Simulator: pagetablesize.py

Command: **python ./pagetablesize.py -v 38 -e 8 -p 2K**

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

VA (bits)	VPN (bits)	D (bits)	pte (byte)
38	**27**	**11**	**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 = Number of entries × Size of each entry =

134,217,728 entries × 8 bytes = 1,073,741,824 bytes   1,048,576 KB   1024 MB