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 64k -s 105

## **Solution:**

## Virtual Address Trace

| VA <b>0x000009fd</b> (decimal: <b>2557</b> → | RA or Invalid address? [VPN= 0 valid]   |  |
|--|---|--|
| VA 0x00001896 (decimal: 6294 →               | RA or Invalid address? [VPN= 1 invalid] |  |
| VA 0x00000ab5 (decimal: 2741 →               | RA or Invalid address? [VPN=0]          |  |
| VA <b>0x0000053d</b> (decimal: <b>1341</b> → | RA or Invalid address? [VPN= 0]         |  |
| VA 0x00000b25 (decimal: 2853 →               | RA or Invalid address? [VPN= 0]         |  |

Simulator: pagetablesize.py

Command: python ./pagetablesize.py -v 20 -e 2 -p 2K

## **Solution:**

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

| VA (bits) | VPN (bits) | D (bits) | pte (byte) |
|-----------|------------|----------|------------|
| 1048576   | ??         | ??       | 64000      |

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 =  $64 \times 2 = 128 \text{ Kb}$