EE463 **Lab. #8** 

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

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## **Solution**

**Simulator:** pagetrans.py

Command: pagetrans.py -a 8k -p 2k -r 128k -s 104

**Solution:** 

Virtual Address Trace

| VA 0x00000088 (decimal: 136 )→  | RA 0x0001b888 [VPN= 0] |  |
|---------------------------------|------------------------|--|
| VA 0x00000555 (decimal: 1365)→  | RA 0x0001bd55 [VPN= 0] |  |
| VA 0x00001ca7 (decimal: 7335) → | RA 0x00019ca7 [VPN= 3] |  |
| VA 0x000003c7 (decimal: 967) →  | RA 0x0001bbc7 [VPN= 0] |  |
| VA 0x000014f8 (decimal: 5368) → | Not Valid              |  |

Simulator: pagetablesize.py

Command: pagetrans.py -a 8k -p 2k -r 128k -s 104

## **Solution:**

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

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

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 MB