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| EE463  Operating System Lab.  King Abdulaziz University  Faculty of Engineering - ECE |  | **Lab. #8**  **\_\_ / 10** |

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**Solution**

**Simulator:** pagetrans.py

**Command:** python ./pagetrans.py -a 4k -p 2k -r 16k -s 106

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x00000f12 (decimal: 3858) → | **RA** or **Invalid** address? **[VPN= 1]** |
| VA 0x00000d22 (decimal: 3362) → | **RA** or **Invalid** address? **[VPN= 1]** |
| VA 0x000000e8 (decimal: 232) → | **RA** or **Invalid** address? **[VPN= 0]** |
| VA 0x00000ce6 (decimal: 3302) → | **RA** or **Invalid** address? **[VPN= 1]** |
| VA 0x00000cdf (decimal: 3295) → | **RA** or **Invalid** address? **[VPN= 1]** |

**Simulator:** pagetablesize.py

**Command:** ./pagetablesize.py -v 32 -e 1 -p 8k

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **32** | **19** | **13** | **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 = 524288 bytes**