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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 16k -p 8k -r 128k -s 107**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x00002a19 (decimal: 10777) → | **RA 0x0001ea19** **[VPN= 1]** |
| VA 0x00001ee1 (decimal: 7905) → | **Invalid [VPN= 0]** |
| VA 0x000013c6 (decimal: 5062) → | **Invalid [VPN= 0]** |
| VA 0x000008d1 (decimal: 2257) → | **Invalid [VPN= 0]** |
| VA 0x00003feb (decimal: 16363) → | **RA 0x0001ffeb [VPN= 1]** |

**Simulator:** pagetablesize.py

**Command: python ./pagetablesize.py -v 38 -e 16 -p 16k**

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **38** | **24** | **14** | **16** |

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 = 256 MB**