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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 8k -p 4k -r 128k -s 107**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x0000150c (decimal: 5388) → | **0x0001f50c [VPN= 1]** |
| VA 0x00000f70 (decimal: 3952) → | **Invalid** |
| VA 0x000009e3 (decimal: 2531) → | **Invalid** |
| VA 0x00000468 (decimal: 1128) → | **Invalid** |
| VA 0x00001ff5 (decimal: 8181) → | **0x0001fff5 [VPN= 1]** |

**Simulator:** pagetablesize.py

**Command: python ./pagetablesize.py -v 38 -e 1 -p 16k**

**Solution:**

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

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

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**