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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 512 -r 128k -s 104**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x00001231 (decimal: 4657) → | **RA 0xC831 [VPN= 9]** |
| VA 0x00000335 (decimal: 821) → | **RA 0x7535 [VPN= 1]** |
| VA 0x00001320 (decimal: 4896) → | **RA 0xC920 [VPN= 9]** |
| VA 0x000019a8 (decimal: 6568) → | **Invalid [VPN= 12]** |
| VA 0x00001a7f (decimal: 6783) → | **Invalid [VPN= 13]** |

**Simulator:** pagetablesize.py

**Command: python ./pagetablesize.py -v 38 -e 8 -p 2K**

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **38** | **27** | **11** | **8** |

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 = 1.074 GB**