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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 1k -r 64k -s 104**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x000014A7 (decimal: 5287) → | **Invalid [VPN= 05]** |
| VA 0x00001B97 (decimal: 7063) → | **RA 0x1F97** **[VPN= 06]** |
| VA 0x0000129B (decimal: 4763) → | **Invalid [VPN= 04]** |
| VA 0x00000C84 (decimal: 3204) → | **RA 0xCC84 [VPN= 03]** |
| VA 0x00000A50 (decimal: 2640) → | **Invalid [VPN= 02]** |

**Simulator:** pagetablesize.py

**Command: python ./pagetablesize.py -v 32 -e 1 -p 2K**

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **32** | **21** | **11** | **0031** |

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 KiB**