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| EE463  Operating System Lab.  King Abdul-Aziz 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 128k -s 104**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x000014a7 (decimal: 5287) → | **RA** or **Invalid** address? **[VPN= 101]** |
| VA 0x00001b97 (decimal: 7063) → 0x3f97 | **RA** or **Invalid** address? **[VPN= 110]** |
| VA 0x0000129b (decimal: 4763) → | **RA** or **Invalid** address? **[VPN= 100]** |
| VA 0x00000c84 (decimal: 3204) → 0x1c84 | **RA** or **Invalid** address? **[VPN= 011]** |
| VA 0x00000450 (decimal: 2640) → | **RA** or **Invalid** address? **[VPN= 010]** |

**Simulator:** pagetablesize.py

**Command: python pagetables.py -v 38 -e 8 -p 4k**

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **38** | **26** | **12** | **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 = 512 MB**