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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 4k -r 128k -s 105

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x00000a7b (decimal: 2683) → | **RA 0x0000ba7b [VPN= 0]** |
| VA 0x0000164a (decimal: 5706) → | **RA 0x0001e64a [VPN= 1]** |
| VA 0x00003014 (decimal: 12308) → | **RA 0x0000a014 [VPN= 3]** |
| VA 0x00000971 (decimal: 2417) → | **RA 0x0000b971 [VPN= 0]** |
| VA 0x00002a31 (decimal: 10801) → | **Invalid [VPN= 2]** |

**Simulator:** pagetablesize.py

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

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **38** | **25** | **13** | **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** = 268,435,456 Bytes = 262,144 KB = 256 MB