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| EE463  Operating System Lab.  King Abdulaziz University  Faculty of Engineering - ECE |  | **Lab. #8**  **\_\_ / 10** |

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| **Name: Abdullah Baabdullah** | **Id: 1936975** |

**Solution**

**Simulator:** pagetrans.py

**Command:** python ./pagetrans.py -a 16k -p 512 -r 128k -s 104

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x000009db (decimal: 2523) → | **invalid [VPN= 4]** |
| VA 0x000000a0 (decimal: 160) → | **RA 0x0001bea0 [VPN= 0]** |
| VA 0x00003411 (decimal: 13329) → | **Invalid [VPN= 26]** |
| VA 0x00000f98 (decimal: 3992) → | **RA 0x0000a998 [VPN= 7]** |
| VA 0x000004a0 (decimal: 1184) → | **Invalid [VPN= 2]** |

**Simulator:** pagetablesize.py

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

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **38** | **27** | **11** | **2** |

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 =4096 bytes = 4 KB**