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

|  |  |
| --- | --- |
| **Name: Hayan Al-Machnouk** | **Id: 1945954** |

**Solution**

**Simulator:** pagetrans.py

**Command: python3 ./pagetrans.py -a 4k -p 2k -r 16k -s 101**

**Solution:**

Virtual Address Trace

|  |  |
| --- | --- |
| VA 0x00000779 (decimal: 1913) → | **RA** 0x00000F79 **[VPN= 0]** |
| VA 0x00000A9D (decimal: 2717) → | **RA** 0x00003A9D **[VPN= 1]** |
| VA 0x0000036E (decimal: 878) → | **RA** 0x00000B6E **[VPN= 0]** |
| VA 0x0000038C (decimal: 908) → | **RA** 0x00000B8C **[VPN= 0]** |
| VA 0x0000049D (decimal: 1181) → | **RA** 0x00000C9D **[VPN= 0]** |

**Simulator:** pagetablesize.py

**Command: python3 ./pagetablesize.py -v 20 -e 4 -p 2K**

**Solution:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **VA (bits)** | **VPN (bits)** | **D (bits)** | **pte (byte)** |
| **20** | **9** | **11** | **4** |

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 = 4 x 29 = 4 x 512 = 2048 Bytes = 2 KB**