

Name: **Nawas Sami Alharbi**

Id: **1936576**

Solution

Simulator: pagetrans.py

Command: **python ./pagetrans.py -a 32k -p 1k -r 256k -s 109**

Solution:

Virtual Address Trace

VA 0x0x00003d4e (decimal: 15694) →	RA 0x002A94e [VPN= 15]
VA 0x0x000063e6 (decimal: 25574) →	RA 0x000323e6 [VPN= 24]
VA 0x000060db (decimal: 24795) →	RA 0x000323e6 [VPN= 24]
VA 0x00002e32 (decimal: 11826) →	Invalid [VPN= 11]
VA 0x000032c3 (decimal: 12995) →	RA 0x00002eac3 [VPN= 12]

Simulator: pagetablesizes.py

Command: **python ./pagetablesizes.py -v 38 -e 8 -p 16k**

Solution:

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

VA (bits)	VPN (bits)	D (bits)	pte (byte)
38	24	14	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 = $2^{26} * 8 = 536870912$ byte = 512MB