**Studio 12**

1. **Names of the people:** Sayali Patil
2. **Dmesg traces:** For default nr\_structs value

[  453.412423] Kernel's page size is: 4096

[  453.412430] Size of datatype struct is: 32

[  453.412437] The number of datatype structs that will fit in a single page of memory is: 128

1. **Dmesg Traces:**
2. **For nr\_structs = 1000**

[  541.183558] Kernel's page size is: 4096

[  541.183565] Size of datatype struct is: 32

[  541.183572] The number of datatype structs that will fit in a single page of memory is: 128

[  541.183581] The number of struct elements that will fit in one page is: 128

[  541.183587] The number of pages needed to allocate to hold nr\_structs is: 8

[  541.183594] The order to be passed to the page allocator is: 3

1. **For nr\_structs = 2000**

[  593.582556] Hello from thread k\_memory. nr\_structs=2000

[  593.582576] Kernel's page size is: 4096

[  593.582593] Size of datatype struct is: 32

[  593.582606] The number of datatype structs that will fit in a single page of memory is: 128

[  593.582616] The number of struct elements that will fit in one page is: 128

[  593.582622] The number of pages needed to allocate to hold nr\_structs is: 16

[  593.582629] The order to be passed to the page allocator is: 4

1. **For nr\_structs = 4000**

[  633.531805] Kernel's page size is: 4096

[  633.531813] Size of datatype struct is: 32

[  633.531820] The number of datatype structs that will fit in a single page of memory is: 128

[  633.531838] The number of struct elements that will fit in one page is: 128

[  633.531852] The number of pages needed to allocate to hold nr\_structs is: 32

[  633.531859] The order to be passed to the page allocator is: 5

1. **For nr\_structs = 200**
2. **Dmesg traces:**
3. **For nr\_structs = 1000**

[  541.183558] Kernel's page size is: 4096

[  541.183565] Size of datatype struct is: 32

[  541.183572] The number of datatype structs that will fit in a single page of memory is: 128

[  541.183581] The number of struct elements that will fit in one page is: 128

[  541.183587] The number of pages needed to allocate to hold nr\_structs is: 8

[  541.183594] The order to be passed to the page allocator is: 3

[  545.482805] Success: All the values match their expected values!

[  545.482904] Unloaded kernel\_memory module

1. **For nr\_structs = 10000**

[  669.500006] Kernel's page size is: 4096

[  669.500010] Size of datatype struct is: 32

[  669.500013] The number of datatype structs that will fit in a single page of memory is: 128

[  669.500020] The number of struct elements that will fit in one page is: 128

[  669.500023] The number of pages needed to allocate to hold nr\_structs is: 79

[  669.500026] The order to be passed to the page allocator is: 7

[  671.242872] Success: All the values match their expected values!

[  671.242948] Unloaded kernel\_memory module

1. **For nr\_structs = 50000**  
   [  722.116044] Loaded kernel\_memory module

[  722.116691] Hello from thread k\_memory. nr\_structs=50000

[  722.116702] Kernel's page size is: 4096

[  722.116706] Size of datatype struct is: 32

[  722.116710] The number of datatype structs that will fit in a single page of memory is: 128

[  722.116717] The number of struct elements that will fit in one page is: 128

[  722.116721] The number of pages needed to allocate to hold nr\_structs is: 391

[  722.116724] The order to be passed to the page allocator is: 9

[  726.364197] Success: All the values match their expected values!

[  726.364351] Unloaded kernel\_memory module