|  |  |  |
| --- | --- | --- |
| foo(**int** a, **int** b) {  **int** \*p, \*q;    p = &a;  …  \*q = …;  … = b;  } | **Stack** q: edx p: esp + 8  **allocations** a: esp + 20 b: esp + 24 | |
| foo:  1 subl $16, %esp  2 lea 20(%esp), 8(%esp)  3 store …, (%edx)  4 load 8(%esp),%ecx  5 load 4(%ecx) | // Allocate 16-byte stack frame  // Put &a(esp+20) into p(esp+8)  // Store to MEM[q]  // Temp ecx ← p (same as &a)  // Load “b” by using the fact that  &b = &a + 4 = ecx + 4 |

**Source Code** **Pseudo Assembly Code**