**This is the memdump for 128 bytes. The table has been filled from the 240 bytes memdump.**

128 bytes in mem.c:

snadgaun@data:~/cs250/project2-src$ ./mem

&str=0x7FFD8335D980

&a=0x7FFD8335D938

&b=0x7FFD8335D93C

&x=0x7FFD8335D950

&y=0x7FFD8335D940

&head=0x7ffd8335d948

head=0x558006c526b0

0x00007FFD8335D938: 05 00 00 00 FB FF FF FF 00 00 00 00 00 00 28 40 ..............(@

0x00007FFD8335D948: B0 26 C5 06 80 55 00 00 41 00 00 00 09 00 00 00 .&...U..A.......

0x00007FFD8335D958: 30 00 00 00 00 00 00 00 54 D9 35 83 FD 7F 00 00 0.......T.5.....

0x00007FFD8335D968: 43 00 00 00 00 00 00 00 00 00 00 00 00 00 15 40 C..............@

0x00007FFD8335D978: 00 00 00 00 00 00 00 00 48 65 6C 6C 6F 20 77 6F ........Hello wo

0x00007FFD8335D988: 72 6C 64 0A 00 00 00 00 00 00 00 00 00 00 00 00 rld.............

0x00007FFD8335D998: 00 C0 7E 61 B0 14 D7 D3 00 00 00 00 00 00 00 00 ..~a............

0x00007FFD8335D9A8: 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 00 ................

-----

0x0000558006C526B0: D0 26 C5 06 80 55 00 00 F0 26 C5 06 80 55 00 00 .&...U...&...U..

0x0000558006C526C0: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x0000558006C526D0: 57 65 6C 63 6F 6D 65 20 00 00 00 00 00 00 00 00 Welcome ........

0x0000558006C526E0: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x0000558006C526F0: 10 27 C5 06 80 55 00 00 30 27 C5 06 80 55 00 00 .'...U..0'...U..

0x0000558006C52700: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x0000558006C52710: 74 6F 20 00 00 00 00 00 00 00 00 00 00 00 00 00 to .............

0x0000558006C52720: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x0000558006C52730: 50 27 C5 06 80 55 00 00 00 00 00 00 00 00 00 00 P'...U..........

0x0000558006C52740: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x0000558006C52750: 63 73 32 35 30 00 00 00 00 00 00 00 00 00 00 00 cs250...........

0x0000558006C52760: 00 00 00 00 00 00 00 00 A1 08 02 00 00 00 00 00 ................

0x0000558006C52770: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

0x0000558006C52780: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

0x0000558006C52790: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

snadgaun@data:~/cs250/project2-src$

**This memdump has been used to fill in the table.**

240 bytes in mem.c:

snadgaun@data:~/cs250/project2-src$ ./mem

&str=0x7FFE6BAC78B0

&a=0x7FFE6BAC7868

&b=0x7FFE6BAC786C

&x=0x7FFE6BAC7880

&y=0x7FFE6BAC7870

&head=0x7ffe6bac7878

head=0x55e41a3556b0

0x00007FFE6BAC7868: 05 00 00 00 FB FF FF FF 00 00 00 00 00 00 28 40 ..............(@

0x00007FFE6BAC7878: B0 56 35 1A E4 55 00 00 41 00 00 00 09 00 00 00 .V5..U..A.......

0x00007FFE6BAC7888: 30 00 00 00 00 00 00 00 84 78 AC 6B FE 7F 00 00 0........x.k....

0x00007FFE6BAC7898: 43 00 00 00 00 00 00 00 00 00 00 00 00 00 15 40 C..............@

0x00007FFE6BAC78A8: 00 00 00 00 00 00 00 00 48 65 6C 6C 6F 20 77 6F ........Hello wo

0x00007FFE6BAC78B8: 72 6C 64 0A 00 00 00 00 00 00 00 00 00 00 00 00 rld.............

0x00007FFE6BAC78C8: 00 D4 E6 0A 3B 9F FC F0 00 00 00 00 00 00 00 00 ....;...........

0x00007FFE6BAC78D8: 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 00 ................

0x00007FFE6BAC78E8: 90 8D F8 A7 55 7F 00 00 00 00 00 00 00 00 00 00 ....U...........

0x00007FFE6BAC78F8: 91 53 66 18 E4 55 00 00 00 00 00 00 01 00 00 00 .Sf..U..........

0x00007FFE6BAC7908: F8 79 AC 6B FE 7F 00 00 00 00 00 00 00 00 00 00 .y.k............

0x00007FFE6BAC7918: 6B 9D D0 79 56 F1 29 4C F8 79 AC 6B FE 7F 00 00 k..yV.)L.y.k....

0x00007FFE6BAC7928: 91 53 66 18 E4 55 00 00 88 7D 66 18 E4 55 00 00 .Sf..U...}f..U..

0x00007FFE6BAC7938: 40 00 1F A8 55 7F 00 00 6B 9D 32 88 0E 26 D5 B3 @...U...k.2..&..

0x00007FFE6BAC7948: 6B 9D 5A 63 A7 BE 82 B2 00 00 00 00 55 7F 00 00 k.Zc........U...

-----

0x000055E41A3556B0: D0 56 35 1A E4 55 00 00 F0 56 35 1A E4 55 00 00 .V5..U...V5..U..

0x000055E41A3556C0: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x000055E41A3556D0: 57 65 6C 63 6F 6D 65 20 00 00 00 00 00 00 00 00 Welcome ........

0x000055E41A3556E0: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x000055E41A3556F0: 10 57 35 1A E4 55 00 00 30 57 35 1A E4 55 00 00 .W5..U..0W5..U..

0x000055E41A355700: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x000055E41A355710: 74 6F 20 00 00 00 00 00 00 00 00 00 00 00 00 00 to .............

0x000055E41A355720: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x000055E41A355730: 50 57 35 1A E4 55 00 00 00 00 00 00 00 00 00 00 PW5..U..........

0x000055E41A355740: 00 00 00 00 00 00 00 00 21 00 00 00 00 00 00 00 ........!.......

0x000055E41A355750: 63 73 32 35 30 00 00 00 00 00 00 00 00 00 00 00 cs250...........

0x000055E41A355760: 00 00 00 00 00 00 00 00 A1 08 02 00 00 00 00 00 ................

0x000055E41A355770: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

0x000055E41A355780: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

0x000055E41A355790: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ................

snadgaun@data:~/cs250/project2-src$ vim mymemdump.c

snadgaun@data:~/cs250/project2-src$

|  |  |  |  |
| --- | --- | --- | --- |
| Variable Name (var) | Address of variable (&var) | Value of Variable  (var) HEX/and typed | If a pointer What it points to (\*var) HEX/and typed |
| str | &str=0x7FFE6BAC78B0 | 48 65 6C 6C 6F 20 77 6F 72 6C 64 0A / **Datatype is char (character array)** | **Hello world (\n is present as well)** / From 0x7FFE6BAC78B0 to 0x7FFE6BAC78BB |
| a | &a=0x7FFE6BAC7868 | 05 00 00 00 / **Datatype is int** | **5 /** From 0x7FFE6BAC7868 to 0x7FFE6BAC786B |
| b | &b=0x7FFE6BAC786C | FB FF FF FF / **Datatype is int** | **-5** / From 0x7FFE6BAC786C to 0x7FFE6BAC786F |
| y | &y=0x7FFE6BAC7870 | 00 00 00 00 00 00 28 40 / **Datatype is double** | **12** / From 0x7FFE6BAC7870 to 0x7FFE6BAC7877 |
| x.a | 0x7FFE6BAC7880 | 41 00 00 00 / **Datatype is char** | **A /** From 0x7FFE6BAC7880 to 0x7FFE6BAC7883 |
| x.i | 0x7FFE6BAC7884 | 09 00 00 00 / **Datatype is int** | **9** / From 0x7FFE6BAC7884 to 0x7FFE6BAC7887 |
| x.b | 0x7FFE6BAC7888 | 30 00 00 00 / **Datatype is char** | **0** / From 0x7FFE6BAC7888 to 0x7FFE6BAC788B |
| x.p | 0x7FFE6BAC788C | 00 00 00 00 84 78 AC 6B / **Datatype is int \*** | **Address of x.i** / From 0x7FFE6BAC788C to 0x7FFE6BAC7893 |
| x.c | 0x7FFE6BAC7898 | 43 00 00 00 / **Datatype is char** | **C /** From 0x7FFE6BAC7898 to 0x7FFE6BAC789B |
| x.y | 0x7FFE6BAC78A0 | 00 00 00 00 00 00 15 40 / **Datatype is double** | **5.25** / From 0x7FFE6BAC78A0 to 0x7FFE6BAC78A7 |
| head | &head=0x7ffe6bac7878 | B0 56 35 1A E4 55 00 00 / **head is of type List** | **Location of head node** **and its contents**/ From 0x7ffe6bac7878 to 0x7ffe6bac787F |
| head->str | 0x55E41A3556D0 | 57 65 6C 63 6F 6D 65 20 / **Datatype is char \*** | **Welcome (There is a space after welcome)** / From 0x55E41A3556D0 to 0x55E41A3556D7 |
| head->next | 0x55E41A3556F0 | 10 57 35 1A E4 55 00 00 / **node is of type List** | **Location of head->next node** **and its contents** / From 0x55E41A3556F0 to 0x55E41A3556F7 |
| head->next->str | 0x55E41A355710 | 74 6F 20 00 00 00 00 00 / **Datatype is char \*** | **to (There is a space after to**) / From 0x55E41A355710 to 0x55E41A355717 |
| head->next->next | 0x55E41A355730 | 50 57 35 1A E4 55 00 00 / **node is of type List** | **Location of head->next->next node** **and its contents** / From 0x55E41A355730 to 0x55E41A355737 |
| head->next->next->str | 0x55E41A355750 | 63 73 32 35 30 00 00 00 / **Datatype is str \*** | **cs250** / From 0x55E41A355750 to 0x55E41A355757 |
| head->next->next->next | NULL pointer | 00 00 00 00 00 00 00 00 | N/A (Since it is a null pointer, no address is highlighted in memory dump). |