|  |  |  |
| --- | --- | --- |
| **Stack** |  | **Heap** |
| addr | type\* | name\* | value | part | fn |  | addr | value | ┌C:\s\264\handouts\lock_icon_by_Julia_Osadcha_via_iconfinder.com.png┐ |
| 200 | int | argc | 1 | args | main(…) |  | 400 |  |  |
| 204 | char\*\* | argv | 🡪 {"./foo"} |  |  |  |  |
| 212 | void\* |  |  | ret addr |  |  |  |  |
| 220 | char\* | s | 600 | locals |  |  |  |  |
| 228 | char\* | pos | 603 |  |  |  |  |  |  |
| 236 | char | current\_char | ‘B’ |  |  |  |  |  |  |
| 237 | char\*\* | a\_pos | 228 | args | get\_next\_char(…) |  |  |  |  |
| 245 | char\* | a\_ch | 236 |  |  |  |  |  |
| 253 | void\* | - | - | ret add |  |  |  |  |
| 261 | char | ch | ‘B’ | locals |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | **Data segment** |
|  |  |  |  |  |  |  | addr | type\* | value |
|  |  |  |  |  |  |  | 600 | char[] | ”AAABBBB” |
|  |  |  |  |  |  |  | 608 |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

Type and name are not actually stored in memory or executable. Addresses shown are fictional. Assume sizeof(int)==4, sizeof(char)==1, sizeof(void\*)==8.