Shaun Chemplavil U08713628

shaun.chemplavil@gmail.com

C/C++ Programming II : Dynamic Memory and File I/O Concepts

149123 Raymond L. Mitchell, Jr., M.S.

07/20/2020

C2A2E3\_StackFrames.pdf

This file contains the stack frame for the given “Greatest Common Divisor” recursive function shown in the prompt

|  |  |  |  |
| --- | --- | --- | --- |
| Relative Address | Absolute Address | Stack Value | Description |
| startup | | | |
| BP+7h | B8Fh | 1005h | Function Return Address |
| BP | B88h | 0h | Previous Frame Address |
| Function main | | | |
| BP+Ch | B83h | ?? | Return Object (int) |
| BP+7h | B7Ch | ?? | Function Return Address (pointer) |
| BP | B75h | B88h | Previous Frame Address (pointer) |
| BP-5h | B70h | ?? | result (int) |
| Function ready | | | |
| BP+Fh | B68h | ?? | Return Object (long – implied conversion from short) |
| BP+7h | B61h | 62Dh | Function Return Address (pointer) (assignment to result) |
| BP | B5Ah | B75h | Previous Frame Address (pointer) |
| BP-4h | B56h | ?? | temp (short) |
| Function gcd 1 | | | |
| BP+1Ah | B51h | ?? | Return Object (int – implied conversion from long) |
| BP+16h | B4Dh | 360 | y argument (short) |
| BP+Eh | B45h | 480 | x argument (long) |
| BP+7h | B3Eh | 3F0h | Function Return Address (pointer) (assignment to **temp**) |
| BP | B37h | B5Ah | Previous Frame Address (pointer) |
| Function gcd 2 | | | |
| BP+1Ah | B32h | ?? | Return Object (int – implied conversion from long) |
| BP+16h | B2Eh | 360 | y argument (short – implied conversion from long) |
| BP+Eh | B26h | 120 | x argument (long) |
| BP+7h | B1Fh | 45Dh | Function Return Address (pointer) (return on line 42) |
| BP | B18h | B37h | Previous Frame Address (pointer) |
| Function gcd 3 | | | |
| BP+1Ah | B13h | ?? | Return Object (int – implied conversion from long) |
| BP+16h | B0Fh | 0 | y argument (short - implied conversion from long) |
| BP+Eh | B07h | 120 | x argument (long) |
| BP+7h | B00h | 45Dh | Function Return Address (pointer) (return on line 42) |
| BP | AF9h | B18h | Previous Frame Address (pointer) |