**Homework Solutions**

1. Show the ARI assuming Bigsub is at Level 1 with dynamic and static chains

The sequence of procedure calls is:

Bigsub calls A

A calls C

C Calls B

|  |  |
| --- | --- |
| ARI for B | Dynamic Link |
| Static Link |
| Return to C |
| ARI for C | Dynamic Link |
| Static Link |
| Return to A |
| ARI for A | Dynamic Link |
| Static Link |
| Return to Bigsub |
| ARI for Bigsub | Dynamic Link |
| Static Link |
| Return to Caller |

1. Show the ARI assuming Bigsub is at Level 1 with dynamic and static chains

The sequence of procedure calls is:

Bigsub calls A

A calls B

B calls C

|  |  |
| --- | --- |
| ARI for C | Parameter -- Plums |
| Dynamic Link |
| Static Link |
| Return to B |
| ARI for B | Local –**Z** |
| Local –**Y** |
| Parameter – **Sum** |
| Dynamic Link |
| Static Link |
| Return to A |
| ARI for A | Local --- **X** |
| Dynamic Link |
| Static Link |
| Return to Bigsub |
| ARI for Bigsub | Local -- **MySum** |
| Local -- **L** |
| Dynamic Link |
| Static Link |
| Return to Caller |

1. Show the ARI assuming Bigsub at Level1 with dynamic and static chains

The sequence of procedure calls is

Bigsub Calls A=>A Calls B=> B Calls A=>A calls C=>C calls D

|  |  |
| --- | --- |
| ARI for D | Dynamic Link |
| Static Link |
| Return to C |
| ARI for C | Dynamic Link |
| Static Link |
| Return to A |
| ARI for A | Parameter -- Flag |
| Dynamic Link |
| Static Link |
| Return to B |
| ARI for B | Dynamic Link |
| Static Link |
| Return to A |
| ARI for A | Parameter -- Flag |
| Dynamic Link |
| Static Link |
| Return to Bigsub |
| ARI for Bigsub | Dynamic Link |
| Static Link |
| Return to Caller |

1. Show the ARI assuming execution reaches position 1 with deep-access dynamic method

The sequence of procedure calls is

Main calls fun2

fun2 calls fun1

fun1 calls fun1

fun1 calls fun3

|  |  |
| --- | --- |
| ARI for fun3 | Local - d |
| Dynamic Link |
| Return to fun1 |
| ARI for fun1 | Local - a |
| Dynamic Link |
| Return to fun1 |
| ARI for fun1 | Local - a |
| Dynamic Link |
| Return to fun2 |
| ARI for fun2 | Local - c |
| Local - b |
| Dynamic Link |
| Return to Main |
| ARI for Main | Local -g |
| Local -f |
| Local -e |