

Chapter - 10

NetID: iv447

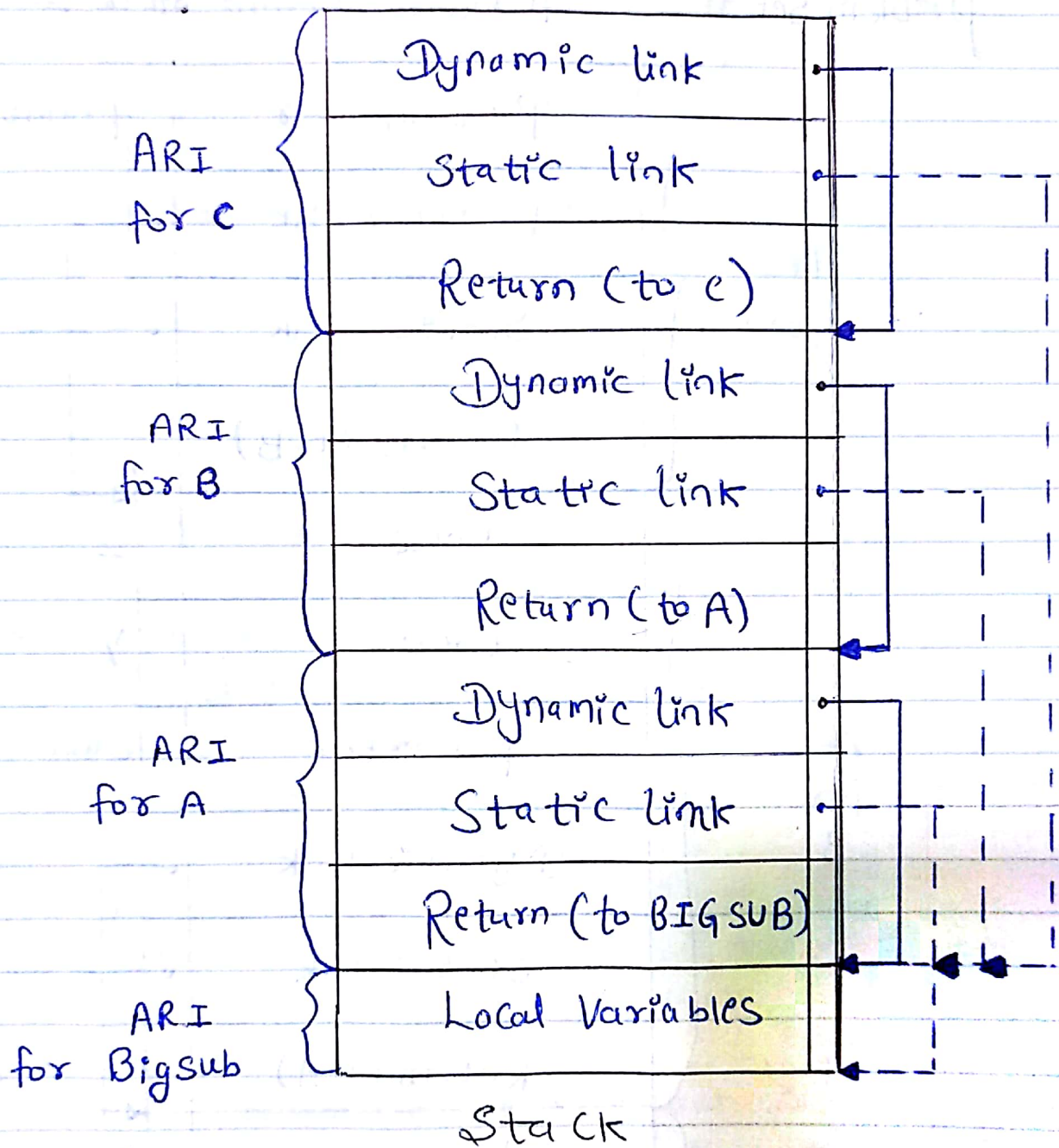
UniID: N17385760

Problem - Sol 1:

Show stack with all activation record instances, including static and dynamic chains, when execution reaches position 1 in the following skeletal program. Assume Bigsub is level 1:

Solution: The stack content of the program is as follows:

Problem Set #1



Bigsub Calls A
A calls B
B calls C

Calling Sequence is:

Bigsub Calls A

A Calls B

B Calls c

Problem Set # 3

Solution: Calling sequence for this program for execution to reach D is

BigSub Calls A

A Calls B

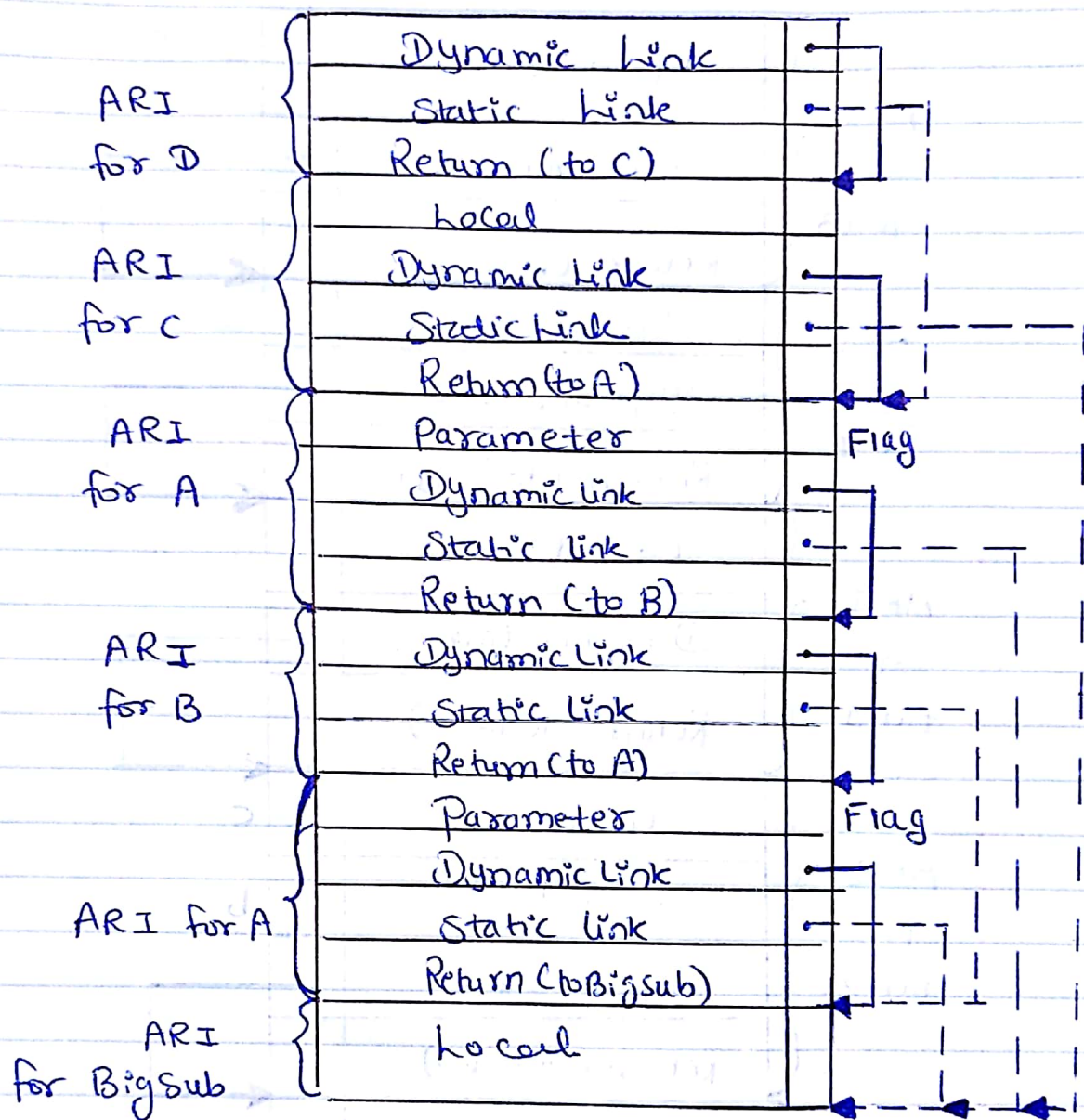
B Calls A

A Calls C

C Calls D

Dynamic link is a pointer which points to the base of the activation record instance of the caller. Here, the dynamic link of each activation record instance (ARI) points to the activation record instance of the Sub program which called it. A Static link is a pointer that points to the base of the activation record instance of the static Parent.

Activation Record:-

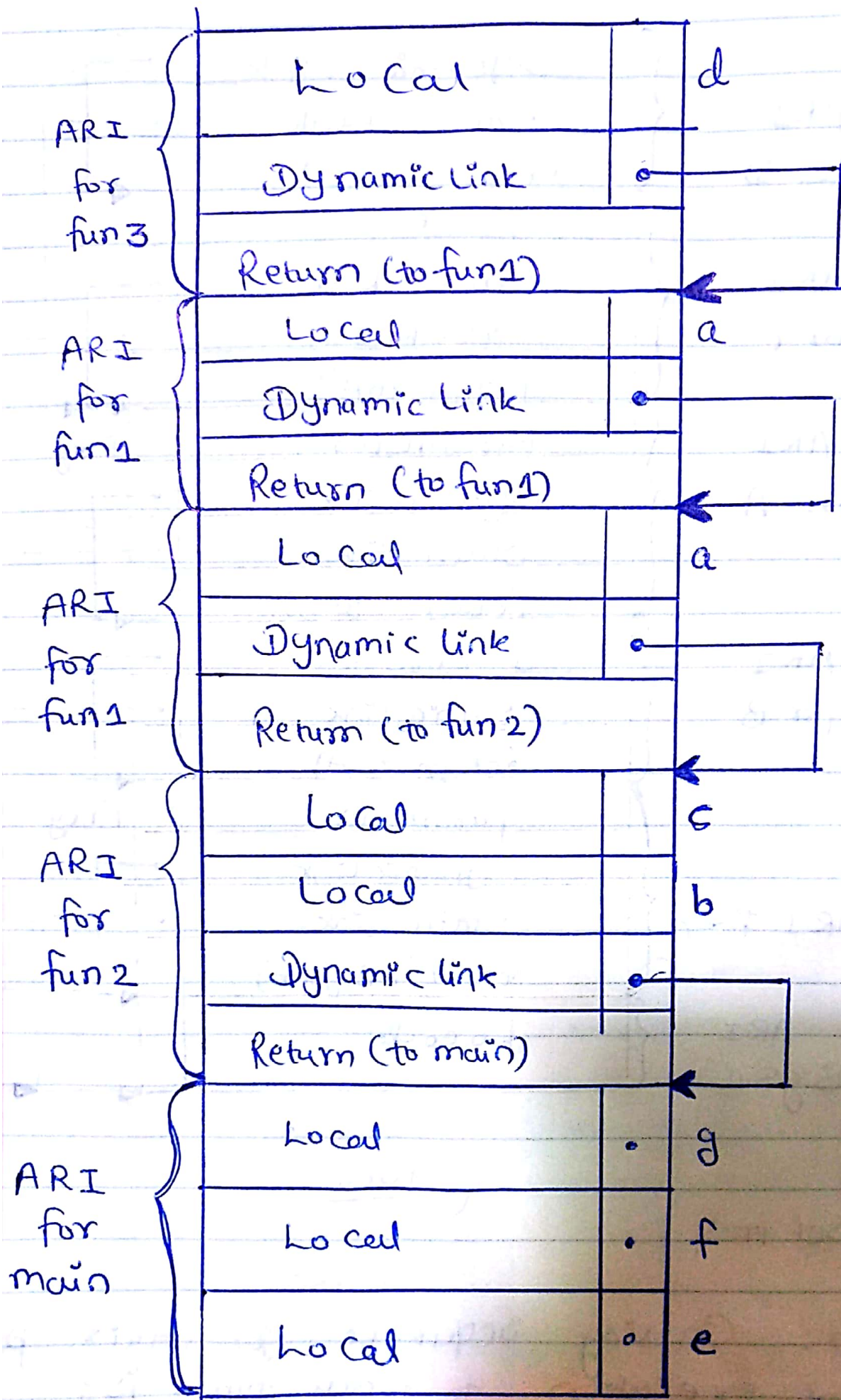


problem Set # 4

Stack

Solution: Calling sequence for this program for execution to reach fun 3 is:

main calls fun2
 fun2 calls fun1
 fun1 calls fun1
 fun1 calls fun3



Stack