Task 1:

curScope -> Scope x

|

locals:

"c" (kind=Var, type=int, level=1, adr=0) ->

"d" (kind=Var, type=int, level=1, adr=1) ->

"e" (kind=Var, type=char, level=1, adr=2)

outer ---> Scope P

|

locals:

"a" (kind=Var, type=int, level=0, adr=0) ->

"b" (kind=Var, type=char, level=0, adr=1) ->

"x" (kind=Meth, type=void, nPars=2) ->

"y" (kind=Meth, type=void, nPars=1)

outer ---> Universe Scope

|

locals:

"int" (Type) ->

"char" (Type) ->

"null" (Con) ->

... (other predeclared names)

outer: null

curScope -> Scope y

|

locals:

"f" (kind=Var, type=char, level=1, adr=0) ->

"g" (kind=Var, type=int, level=1, adr=1) ->

"h" (kind=Var, type=char, level=1, adr=2)

outer ---> Scope P

|

locals:

"a" (kind=Var, type=int, level=0, adr=0) ->

"b" (kind=Var, type=char, level=0, adr=1) ->

"x" (kind=Meth, type=void, nPars=2) ->

"y" (kind=Meth, type=void, nPars=1)

outer ---> Universe Scope

|

locals:

"int" (Type) ->

"char" (Type) ->

"null" (Con) ->

... (other predeclared names)

outer: null

Task 2:  
  
curScope -> Scope a

|

locals:

"c" (kind=Var, type=Arr, elemType=int, level=1, adr=0) ->

"d" (kind=Var, type=Arr, elemType=int, level=1, adr=1) ->

"e" (kind=Var, type=Arr, elemType=char, level=1, adr=2)

outer ---> Scope P

|

locals:

"a" (kind=Var, type=Arr, elemType=int, level=0, adr=0) ->

"b" (kind=Var, type=char, level=0, adr=1) ->

"a" (kind=Meth, type=void, nPars=0)

outer ---> Universe Scope

|

locals:

"int" (Type) ->

"char" (Type)->

"null" (Con) ->

"ord" (Meth) ->

"chr" (Meth) ->

"len" (Meth)

outer: null

Task 3:

curScope -> Scope main

|

locals:

"x" (kind=Var, type=A, level=1, adr=0) ->

"y" (kind=Var, type=B, level=1, adr=1) ->

"z" (kind=Var, type=B, level=1, adr=2)

outer ---> Scope P

|

locals:

"A" (kind=Type, type=Class, nFields=1, fields="f")->

"B" (kind=Type, type=Class, nFields=2, fields="g" -> "h")->

"main" (kind=Meth, type=void, nPars=0)

outer ---> Universe Scope

|

locals:

"int" (Type) ->

"char" (Type)->

"null" (Con) ->

"ord" (Meth) ->

"chr" (Meth) ->

"len" (Meth) ->

outer: null