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## NewBie's Corner Session 28 Various Methods to Traverse a Global

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Welcome to NewBie's Corner, a weekly or biweekly post covering basic Caché Material.

Judging from the number of responses to Session 27 Traversing A Global, developers are passionate about their methods. I am not here to judge the merit of the various methods.

Over the next few pages I will demonstrate a number of methods to Traverse a Global. If you don't already have a favorite they may help you pick one.

I will repeat the method from Session 27 just to have all methods in one post.

There may be variations on these methods and perhaps methods I am not aware of. Feel free to chime in and express your opinion, that is how we all learn.

If you use Caché Objects and Methods with Caché SQL you should never have to worry about traversing a Global, that is the best to my way of thinking.

```
Start()  
Kill ^Trans  
Set ^Trans("Cars","Chevy","Malibu")="4 Speed"  
Set ^Trans("Cars","Ford","Fairlane")="Cheap"  
Set ^Trans("Cars","Ford","Mustang")="Fast"  
Set ^Trans("Cars","Toyota","Camery")="Nice"  
Set ^Trans("Cars","Toyota","Tercel")="Not as Nice"  
;ZW ^Trans  
Use 0  
  
Write !,"*****"  
Write !,"Method: For Structure"  
Write !,"*****"  
Set Sub1="" For {  
    Set Sub1=$O(^Trans(Sub1)) Q:Sub1=""  
    Write !,"Sub1: ",Sub1  
    Set Sub2="" For {  
        Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2=""  
        Write !," ==> Sub2: ",Sub2  
        Set Sub3="" For {  
            Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q  
:Sub3=""  
            Write !," ==> Sub3: ",Sub3  
            Set Data=(^Trans(Sub1,Sub2,Sub3))  
            Write !," =====> ",Data: ",Data,!  
        }  
    }  
}
```

```
Write !!, "*****"
Write !, "Method: For Do Dots"
Write !, "*****"

Set Sub1="" For Do Q:Sub1=""
. Set Sub1=$O(^Trans(Sub1)) Q:Sub1=""
. Write !, "Sub1: ", Sub1
. Set Sub2="" For Do Q:Sub2=""
. . Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2=""
. . Write !, " ==> Sub2: ", Sub2
. . Set Sub3="" For Do Q:Sub3=""
. . . Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q:Sub3=""
. . . Write !, " ==> Sub3: ", Sub3
. . . Set Data=(^Trans(Sub1,Sub2,Sub3))
. . . Write !, " =====> ", " Data: ", Data, !

Write !!, "*****"
Write !, "Method: Do While"
Write !, "*****"
    Set Sub1=""
    Do {
        Set Sub1=$O(^Trans(Sub1)) Q:Sub1=""
        Write !, "Sub1: ", Sub1
        Set Sub2=""
        Do {
            Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2=""
            Write !, " ==> Sub2: ", Sub2
            Set Sub3=""
            Do {
                Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q:Sub3=""
                Write !, " =====> Sub3: ", Sub3
                Set Data=(^Trans(Sub1,Sub2,Sub3))
                Write !, " =====> ", " Data: ", Data, !
            } While Sub3=""
        } While Sub2=""
    } While Sub1=""

Write !!, "*****"
Write !, "Method: While"
Write !, "*****"
Set Sub1=""
Set Sub1=$O(^Trans(Sub1))
While Sub1="" {
    Write !, "Sub1: ", Sub1
    Set Sub2=""
    Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2=""
    While Sub2="" {
        Write !, " ==> Sub2: ", Sub2
        Set Sub3=""
        Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q:Sub3=""
        While Sub3="" {
            Write !, " =====> Sub3: ", Sub3
            Set Data=(^Trans(Sub1,Sub2,Sub3))
```

```
Write !," =====>"," Data: ",Data,!
Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q

:Sub3=""
    }
    Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2=""
    }
Set Sub1=$O(^Trans(Sub1))
}

Write !,"*****"
Write !,"Method: Levels"
Write !,"*****"
Set Sub1=""
Level1
    Set Sub1=$O(^Trans(Sub1))
    If Sub1="" GoTo EndLevels
    Write !,"Sub1: ",Sub1
    Set Sub2="" GoTo Level2
    GoTo Level1
Level2
    Set Sub2=$O(^Trans(Sub1,Sub2))
    If Sub2="" GoTo Level1
    Write !," ==> Sub2: ",Sub2
    Set Sub3="" GoTo Level3 Q:Sub3=""
    GoTo Level2
Level3
    Set Sub3=$O(^Trans(Sub1,Sub2,Sub3))
    If Sub3="" GoTo Level2
    Write !," ====> Sub3: ",Sub3
    Set Data=(^Trans(Sub1,Sub2,Sub3))
    Write !," =====>"," Data: ",Data,!
    GoTo Level3
EndLevels

Write !,"*****"
Write !,"Method: One Line"
Write !,"*****"

Set Sub1="" For Set Sub1=$O(^Trans(Sub1)) Q:Sub1="" Write !,"Sub1: ",Sub1 Set Sub2
="" For Set Sub2=$O(^Trans(Sub1,Sub2)) Q:Sub2="" Write !," ==> Sub2: ",Sub2 Set Sub
3="" For Set Sub3=$O(^Trans(Sub1,Sub2,Sub3)) Q:Sub3="" Write !," ====> Sub3: ",Sub3
Set Data=(^Trans(Sub1,Sub2,Sub3)) Write !," =====>"," Data: ",Data,!
```

--Mike Kadow

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If you have a comment, please respond through the InterSystems Developer Community, don't send me private email, unless of course you wish to address me only.

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