

Log Explanation

Saturday, March 21, 2015
11:07 PM

Hints:

INFO | hospital(ID= 683 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 30) --{Lineno= 30}--within-->> __WORLD(ID= 866 : Location= global : Lineno= 0)

>> The above statement shows the hospital object with the following details

1) unique # tag	2) trusted owner	3) dynamic owner	4) owner at creation time	5) Location of object (class declaration or method declaration)	6) Line no of the object declaration
7) Statement line no + relationship type "within"	8) Target Object and its details				

Red-Color Highlighted text shows the ERROR statements and their statement lineno on the edges.

For Example:

ERROR | researcher(ID= 507 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 32) --{Lineno= 46}--point_violation-->>> pr(ID= 507 : Location= declassified_level : Lineno= 42)

Shows the error at the statement **Lineno = 46**, where we are trying to execute the statement **"researcher -> pr;"**.

1. Here the pr is the object declassified by hospital to the World level in the ownership tree.
2. The researcher object does not have any neighbourhood relation to the pr's trusted owner, which means there is no explicit permission given to researcher to access the pr.

Hence we are getting the **Point Violation error** in our program.

INFO | << Printing the Final Heap Information (Graph) >>

INFO | /***** Objects Association *****/ This section gives object and its type relationship and statement execution output details

INFO | hospital(ID= 683 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 30) --{Lineno= 30}--within-->> __WORLD(ID= 866 : Location= global : Lineno= 0)

INFO | hospital(ID= 683 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 30) --{Lineno= 30}--type-->> pack2.Hospital(ID= 260 : Lineno= 30)

INFO | hospital(ID= 683 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 30) --{Lineno= 45}--can_access-->>> pr(ID= 529 : Location= declassified_level : Lineno= 42)

INFO | researcher(ID= 507 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 32) --{Lineno= 32}--within-->> __WORLD(ID= 866 : Location= global : Lineno= 0)

INFO | researcher(ID= 507 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 32) --{Lineno= 32}--type-->> pack1.Researcher(ID= 411 : Lineno= 32)

ERROR | researcher(ID= 507 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 32) --{Lineno= 46}--point_violation-->>> pr(ID= 507 : Location= declassified_level : Lineno= 42)

INFO | hacker(ID= 3 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 34) --{Lineno= 34}--within-->> __WORLD(ID= 866 : Location= global : Lineno= 0)

INFO | hacker(ID= 3 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 34) --{Lineno= 34}--type-->>> pack1.Hacker(ID= 997 : Lineno= 34)

ERROR | hacker(ID= 3 : Towner= __WORLD : Downer= __WORLD : Sowner= __WORLD : Loc= class_level : Lineno= 34) --{Lineno= 47}--point_violation-->>> pr(ID= 3 : Location= declassified_level : Lineno= 42)

INFO | pr(ID= 529 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD : Loc= declassified_level : Lineno= 42) --{Lineno= 42}--type-->>> pack1.PatientRecord(ID= 938 : Lineno= 42)

INFO | pr(ID= 529 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD : Loc= declassified_level : Lineno= 42) --{Lineno= 42}--within-->> __WORLD(ID= 866 : Location= global : Lineno= 0)

INFO | pr(ID= 529 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD : Loc= declassified_level : Lineno= 42) --{Lineno= 44}--assigned_with-->>> pr(ID= 247 : Location= declassified_level : Lineno= 22)

INFO | doctors(ID= 679 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 10) --{Lineno= 10}--within-->>> hospital(ID= 683 : Location= class_level : Lineno= 30)

INFO | doctors(ID= 679 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 10) --{Lineno= 10}--type-->>> pack2.Doctor(ID= 143 : Lineno= 10)

INFO | doctors(ID= 679 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 10) --{Lineno= 23}--can_access-->>> pr(ID= 247 : Location= declassified_level : Lineno= 22)

INFO | doctors(ID= 679 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 10) --{Lineno= 27}--can_access-->>> pr(ID= 247 : Location= declassified_level : Lineno= 22)

ERROR | doctors(ID= 679 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 10) --{Lineno= 25}--point_violation-->>> pr(ID= 679 : Location= declassified_level : Lineno= 22)

INFO | mRecords(ID= 757 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 11) --{Lineno= 11}--within-->>> hospital(ID= 683 : Location= class_level : Lineno= 30)

INFO | mRecords(ID= 757 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 11) --{Lineno= 11}--type-->>> pack1.MedicalRecords(ID= 453 : Lineno= 11)

INFO | mRecords(ID= 757 : Towner= __WORLD:hospital : Downer= __WORLD:hospital : Sowner= __WORLD:hospital : Loc= class_level : Lineno= 11) --{Lineno= 26}--point-->>> doctors(ID= 679 : Location= class_level : Lineno= 10)

INFO | pr(ID= 247 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD:hospital : Loc= declassified_level : Lineno= 22) --{Lineno= 22}--type-->>> pack1.PatientRecord(ID= 938 : Lineno= 42)

INFO | pr(ID= 247 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD:hospital : Loc= declassified_level : Lineno= 22) --{Lineno= 24}--assigned_with-->>> patientRecord(ID= 247 : Location= declassified_level : Lineno= 13)

INFO | pr(ID= 247 : Towner= __WORLD:hospital : Downer= __WORLD : Sowner= __WORLD:hospital : Loc= declassified_level : Lineno= 22) --{Lineno= 22}--within-->>> __WORLD(ID= 866 : Location= global : Lineno= 0)

INFO | patientRecord(ID= 247 : Towner= __WORLD:hospital:mRecords : Downer= __WORLD:hospital : Sowner= __WORLD:hospital:mRecords : Loc= declassified_level : Lineno= 13) --{Lineno= 13}--type-->>> pack1.PatientRecord(ID= 938 : Lineno= 42)

INFO | patientRecord(ID= 247 : Towner= __WORLD:hospital:mRecords : Downer= __WORLD:hospital : Sowner= __WORLD:hospital:mRecords : Loc= declassified_level : Lineno= 13) --{Lineno= 13}--within-->>> hospital(ID= 683 : Location= class_level : Lineno= 30)

INFO | /***** Types *****/ Gives the information about number of Types involved in this example

INFO | pack2.Hospital(ID= 260 : Lineno= 30)

INFO | pack1.Researcher(ID= 411 : Lineno= 32)

INFO | pack1.Hacker(ID= 997 : Lineno= 34)

INFO | pack1.PatientRecord(ID= 938 : Lineno= 42)

INFO | pack2.Doctor(ID= 143 : Lineno= 10)

INFO | pack1.MedicalRecords(ID= 453 : Lineno= 11)

INFO | /***** Classes Details *****/

INFO | pack2.Hospital(ID= 260 : Lineno= 30) --{ Lineno= 14}--function-->>> getDoctorsCopy(ReturnType=
{ "type_name": "PatientRecord", "isGenericType": false, "staticowner": "this", "dynamicowner": "this", "trustedowner": "this" } : Lineno= pack2.Hospital)

INFO | pack2.Hospital(ID= 260 : Lineno= 30) --{ Lineno= 21}--function-->>> getOriginalPatientRecord(ReturnType=
{ "type_name": "PatientRecord", "isGenericType": false, "staticowner": "this", "dynamicowner": "this", "trustedowner": "this" } : Lineno= pack2.Hospital)

INFO | pack1.MedicalRecords(ID= 453 : Lineno= 11) --{ Lineno= 15}--function-->>> getRecords(ReturnType=
{ "type_name": "PatientRecord", "isGenericType": false, "staticowner": "this", "dynamicowner": "this", "trustedowner": "this" } : Lineno= pack1.MedicalRecords)