

RestMine vers. 2.1

A. Find

- [Objects](#)
- [Items in code](#)
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B. Audit

- [Compare code versions](#)
- [System Inventory \(CSV file\)](#)
- [Code Anomaly](#)
- [Quality Metrics](#)

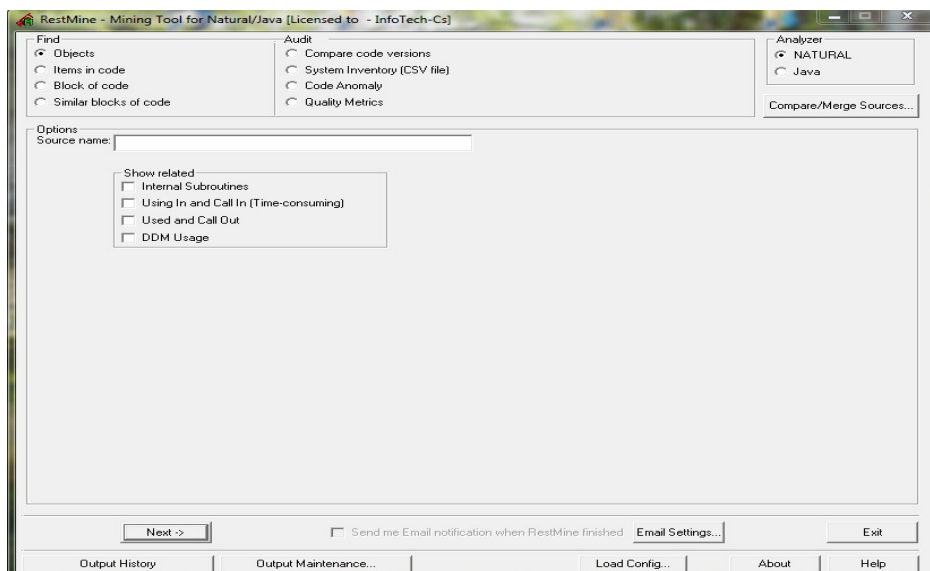
C. RestMine – Settings

- [Select input/output](#)
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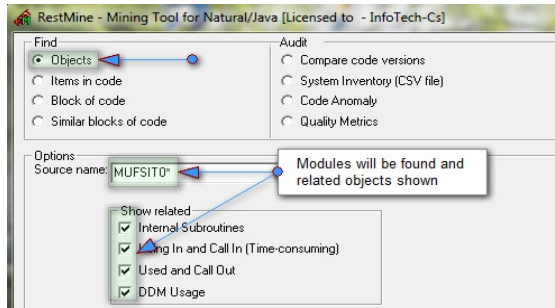
D. RestMine – Others

- Internal Explorer ver. 7 or higher is required
- [Disable the ActiveX IE message:](#)
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RestMine menu



A. Find – Objects



Find – Objects (Results)

file:///C:/RestMine%20outputs/Pres/Jar/showtbl.html?url=.../20160216150106/results.tbl&parent=.../main.tbl&next=20160216150106/results.tbl

InfoTech-Cs :: Rest... x InfoTech-Cs :: RestWe... InfoTech-Cs :: RestWe... InfoTech-Cs :: RestWe... InfoTech-Cs :: F

Home << >>

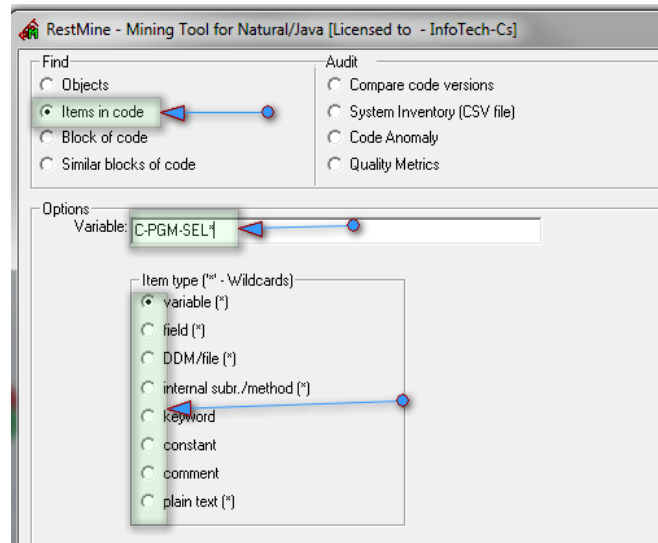
RestMine vers. 1.1 - Licensed to: - InfoTech-Cs Date: 16. 2.2016

Settings
Path: c:\Natpgm\Compare\2015\Src

Object Find: MUFST0*

Object	Library	Date	Inter. Subr.	Used In	Call In	Using	Call Out	DDM Usage
MUFST00.NSP	mufstp	10.11.2015	MAPPA DECOD-CONT-G-X-FUNZ		MUFSSAT00.NSP MUFST01.NSP MUFST06.NSP MUFST07.NSP MUFST08.NSP XXXXIT08.NSP	MUFSSXG00.NSG MUFSSXLG1.NSL MUFSSXLGE.NSL MUFSSAL00.NSL MUFSSIV00.NSM	MUFSSXS01.NSS MUFSSSRJ1.NSP MUFST01.NSP MUFST05.NSP MUFST03.NSP MUFST04.NSP MUFST06.NSP MUFST07.NSP SIAETE01.NSN MUFSSHELP.NSN SIAETE00.NSN MUFSSAT00.NSP	
MUFST01.NSP	mufstp	13.5.2008	MAPPA CONTROLLI DECOD-CONT-G-X-FUNZ		MUFST00.NSP	MUFSSXR01.NSC MUFSSXR02.NSC MUFSSXG00.NSG MUFSSXLG1.NSL MUFSSXLGE.NSL MUFSSGL00.NSL MUFSSAL01.NSL MUFSSIV01.NSM MUFSSERR0.NSM	MUFSSXS01.NSS MUFSSSRJE.NSP SIAETE01.NSN MUFSSAT00.NSP MUFSSHELP.NSN SIAETE00.NSN MUFST00.NSP	TABELLE
MUFST03.NSP	mufstp	13.5.2008	MAPPA CONTROLLI DECOD-CONT-G-X-FUNZ		MUFST00.NSP	MUFSSXR01.NSC MUFSSXR02.NSC MUFSSXG00.NSG MUFSSXLG1.NSL MUFSSXLGE.NSL MUFSSGL00.NSL MUFSSAL01.NSL MUFSSIV03.NSM MUFSSERR0.NSM	MUFSSXS01.NSS MUFSSSRJE.NSP SIAETE01.NSN MUFSSAT00.NSP MUFSSHELP.NSN SIAETE00.NSN MUFSSATB0.NSP	
MUFST04.NSP	mufstp	17.11.2015	MAPPA CONTROLLI RICERCA-PER-IPI DECOD-CONT-G-X-FUNZ		MUFST00.NSP MUFSSREP6.NSP	MUFSSXR01.NSC MUFSSXR17.NSC MUFSSXR02.NSC MUFSSXG00.NSG MUFSSXLG1.NSL MUFSSXLGE.NSL MUFSSXLV4.NSL MUFSSRLV3.NSL MUFSSRLV2.NSL MUFSSGL00.NSL MUFSSAL01.NSL MUFSSANL4.NSL MUFSSIV04.NSM MUFSSERR0.NSM	MUFSSXS01.NSS MUFSSSRJ1.NSP SIAETE01.NSN MUFSSREP6.NSP SIAETE05.NSN MUFSSAT00.NSP MUFSSHELP.NSN SIAETE00.NSN MUFSSATB0.NSP	OPE-MAD CNFT-AADD-OPERE SIS-ANAGRAF MUFSS-MAD MUFSS-PROG-MUSI

A. Find – Items in code



Find – Items in code (Results)

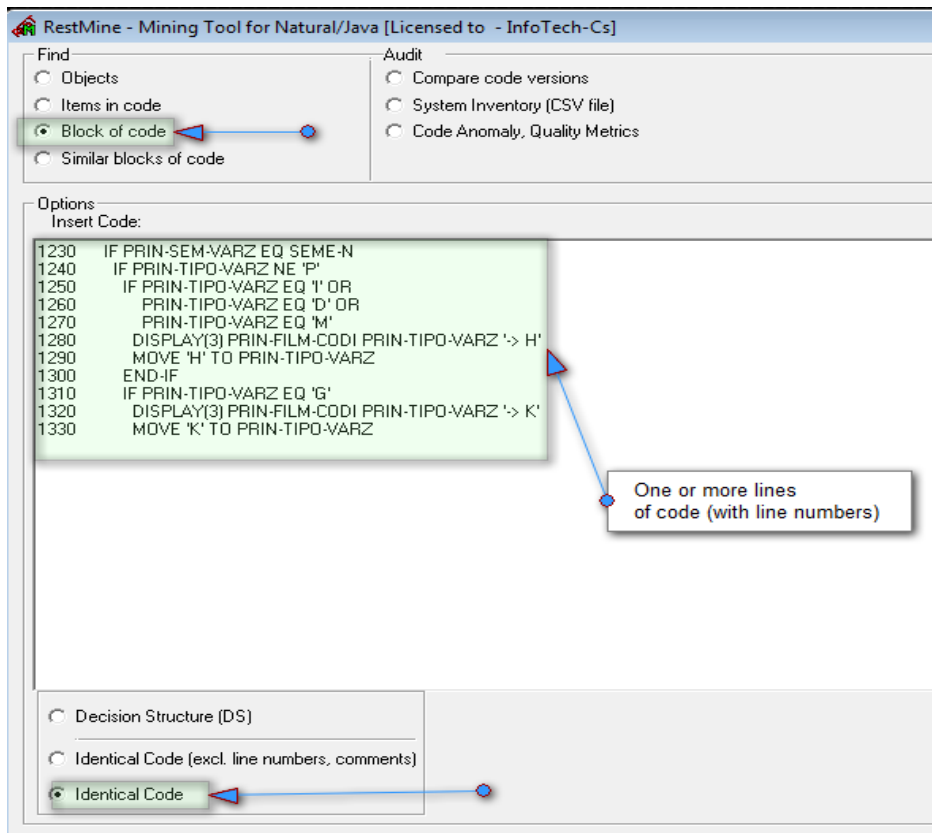
Settings
variable: 'C-PGM-SEL*'

< > PREVIOUS NEXT NO FILTER UNLOAD SAVE LOAD to RestNat

Total: 2	0	CIOPCTI2.NSP	c:\natpgm\compare\2015\src\cioptp	2004-10-15 22:03:44	Variable
\$160	MOVE 'C2' TO X-TIPO-OP				
\$170	MOVE 'CIOPCTI2' TO C-PGM-SEL				
\$180	MOVE INDEXED G-SELECT TO M-SELECT-ELE <1>				
\$180	MOVE INDEXED G-SELECT TO M-SELECT-ELE <1>				
\$190	MOVE 'CIOPCM02' TO C-PGM-SEL				
\$200	MOVE INDEXED G-SELECT TO M-SELECT-ELE <2>				

Library/Package	Object	Date	Variable
CIOPTP	cioparje.nsp	6.9.2013 12:06:24	2
CIOPTP	ciopbf02.nsp	25.9.2008 9:20:24	3
CIOPTP	ciopctea.nsp	30.9.2013 11:52:20	1
CIOPTP	ciopcti2.nsp	15.10.2004 22:03:44	2
CIOPTP	cioppf02.nsp	16.10.2004 10:39:54	9
CIOPTP	cioppm01.nsp	15.10.2004 22:03:52	9
CIOPTP	cioppr02.nsp	15.10.2004 22:03:52	9
CIOPTP	cioppte3.nsp	15.10.2004 22:03:54	9

A. Find: Block of code – Identical code



Find: Block of code - Identical code (Results)

The screenshot shows the RestMine interface with the following settings and results:

- Home:** RestMine vers. 1.1 - Licensed to: - InfoTech-Cs Date: 17. 2.2016 10:53:43
- Settings:**
 - Input path: c:\natpgm\Compare\2015\Src
 - Block of code - pattern
- Code Block:**

```

1230 IF PRIN-SEM-VARZ EQ SEME-N
1240 IF PRIN-TIPO-VARZ NE 'P'
1250 IF PRIN-TIPO-VARZ EQ 'I' OR
1260 PRIN-TIPO-VARZ EQ 'D' OR
1270 PRIN-TIPO-VARZ EQ 'M'
1280 DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> H'
1290 MOVE 'H' TO PRIN-TIPO-VARZ
1300 END-IF
1310 IF PRIN-TIPO-VARZ EQ 'G'
1320 DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> K'
1330 MOVE 'K' TO PRIN-TIPO-VARZ
                
```
- Navigation:** PREVIOUS, NEXT, NO FILTER, UNLOAD, SAVE, LOAD to RestNat
- Summary:** Total: 1 0 MUF5AB2A.NSP c:\natpgm\compare\2015\src\mufstp 2004-11-30 14:31:48
- Code Block (Result):**

```

1220* END-NOREC
/* AGGIORNAMENTO RECORD DI TESTA
1230 IF PRIN-SEM-VARZ EQ SEME-N
1240 IF PRIN-TIPO-VARZ NE 'P'
1250 IF PRIN-TIPO-VARZ EQ 'I' OR
1260 PRIN-TIPO-VARZ EQ 'D' OR
1270 PRIN-TIPO-VARZ EQ 'M'
1280 DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> H'
1290 MOVE 'H' TO PRIN-TIPO-VARZ
1300 END-IF
1310 IF PRIN-TIPO-VARZ EQ 'G'
1320 DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> K'
1330 MOVE 'K' TO PRIN-TIPO-VARZ
                
```
- Table:**

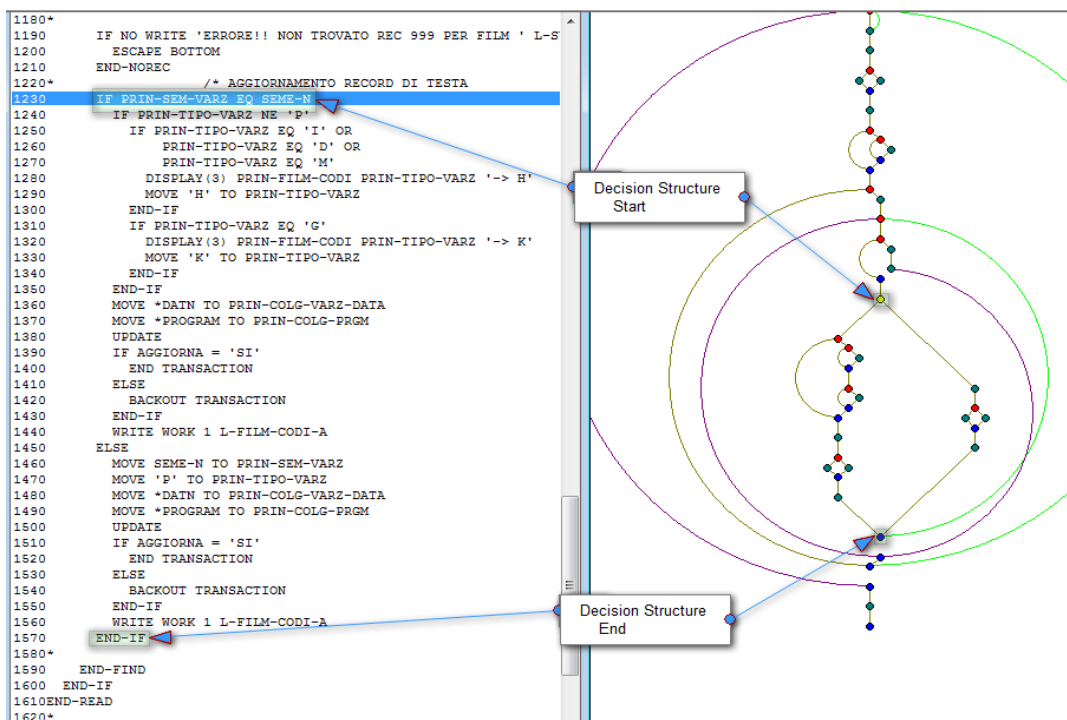
Library/Package	Object	Date	Plain Text
MUFSTP	muf5ab2a.nsp	30.11.2004 14:31:48	1
- Callouts:**
 - "Block of code - pattern" points to the search criteria.
 - "Result" points to the table entry.

A. Find: Block of code – Decision Structure (DS)

The screenshot shows the RestMine interface with the following settings:

- Objects:** Block of code (selected)
- Audit:** Compare code versions, System Inventory (CSV file), Code Anomaly, Quality Metrics
- Analyzer:** NATURAL (selected)
- Options:**
 - Insert Code:** A block of code from lines 1230 to 1470 is highlighted in green.
 - Decision Structure (DS):** Selected
 - Identical Code (excl. line numbers, comments):** Unselected
 - Identical Code:** Unselected
- DS Options:**
 - DS + Stmt. Content: Unselected
 - DS + Calls: Unselected
 - DS + Constants: Unselected
 - DS + References: Unselected
 - DS + Calls (Ident.): Unselected
 - DS + Constants + References: Unselected
 - DS + Constants: Unselected
 - DS + References: Unselected

Decision Structure – part of the graphical abstraction (Flow Graph) of Source Code (selected in RestNat)



A. Find: Block of code – Decision Structure (DS) (Results)

PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE	LOAD to RestNat
	TMP.NAT				c:\nrfotech\vestmine 2016-02-17 14:30:12
1230	IF PRIN-SEM-VARZ EQ SEME-N				
1240	IF PRIN-TIPO-VARZ NE 'P'				
1250	IF PRIN-TIPO-VARZ EQ 'I' OR				
1260	PRIN-TIPO-VARZ EQ 'D' OR				
1270	PRIN-TIPO-VARZ EQ 'M'				
1280	DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> H'				
1290	MOVE 'H' TO PRIN-TIPO-VARZ				
1300	END-IF				
1310	IF PRIN-TIPO-VARZ EQ 'G'				
1320	DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> K'				
1330	MOVE 'K' TO PRIN-TIPO-VARZ				
1340	END-IF				
1350	END-IF				
1360	MOVE *DATN TO PRIN-COLG-VARZ-DATA				
1370	MOVE *PROGRAM TO PRIN-COLG-PRGM				
1380	UPDATE				
1390	IF AGGIORNA = 'SI'				
1400	END TRANSACTION				
1410	ELSE				
1420	BACKOUT TRANSACTION				
1430	END-IF				
1440	WRITE WORK 1 L-FILM-CODI-A				
1450	ELSE				
1460	MOVE SEME-N TO PRIN-SEM-VARZ				
1470	MOVE 'P' TO PRIN-TIPO-VARZ				
1480	MOVE *DATN TO PRIN-COLG-VARZ-DATA				
1490	MOVE *PROGRAM TO PRIN-COLG-PRGM				
1500	UPDATE				
1510	IF AGGIORNA = 'SI'				
1520	END TRANSACTION				
1530	ELSE				
1540	BACKOUT TRANSACTION				
1550	END-IF				
1560	WRITE WORK 1 L-FILM-CODI-A				
1570	END-IF				

PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE	LOAD to RestNat
Total: 1	0	MUFSA82A.NSP			c:\natpgm\compare\2015\src\mufstp 2004-11-30 14:31:48 Decision
1220*	/* AGGIORNAMENTO RECORD DI TESTA				
1230	IF PRIN-SEM-VARZ EQ SEME-N				
1240	IF PRIN-TIPO-VARZ NE 'P'				
1250	IF PRIN-TIPO-VARZ EQ 'I' OR				
1260	PRIN-TIPO-VARZ EQ 'D' OR				
1270	PRIN-TIPO-VARZ EQ 'M'				
1280	DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> H'				
1290	MOVE 'H' TO PRIN-TIPO-VARZ				
1300	END-IF				
1310	IF PRIN-TIPO-VARZ EQ 'G'				
1320	DISPLAY(3) PRIN-FILM-CODI PRIN-TIPO-VARZ '-> K'				
1330	MOVE 'K' TO PRIN-TIPO-VARZ				
1340	END-IF				
1350	END-IF				
1360	MOVE *DATN TO PRIN-COLG-VARZ-DATA				
1370	MOVE *PROGRAM TO PRIN-COLG-PRGM				
1380	UPDATE				
1390	IF AGGIORNA = 'SI'				
1400	END TRANSACTION				
1410	ELSE				
1420	BACKOUT TRANSACTION				
1430	END-IF				
1440	WRITE WORK 1 L-FILM-CODI-A				
1450	ELSE				
1460	MOVE SEME-N TO PRIN-SEM-VARZ				
1470	MOVE 'P' TO PRIN-TIPO-VARZ				
1480	MOVE *DATN TO PRIN-COLG-VARZ-DATA				
1490	MOVE *PROGRAM TO PRIN-COLG-PRGM				
1500	UPDATE				
1510	IF AGGIORNA = 'SI'				
1520	END TRANSACTION				
1530	ELSE				
1540	BACKOUT TRANSACTION				
1550	END-IF				
1560	WRITE WORK 1 L-FILM-CODI-A				
1570	END-IF				

A. Find - Similar blocks of code

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Find

- Objects
- Items in code
- Block of code
- Similar blocks of code

Audit

- Compare code versions
- System Inventory (CSV file)
- Code Anomaly
- Quality Metrics

Analyzer

- NATURAL
- Java

Options

Nesting Level: 7 <= n <= 8 Top Nesting Level

DECIDE / switch Branches: > 5 > 12

Subroutine / Method, count: 2 <= n <= 2 Identical name

Identical Code (excl. line numbers, comments)

Decision Structure (DS)

- DS + Stmt. Content
- DS + Calls
- DS + Calls (Ident.)
- DS + Constants
- DS + References
- DS + Constants + Calls
- DS + Constants + References

Contain Text (coma is separator): CIOP-QUAL, CIAO-CAE-CODI OR AND

Callouts:

- Blocks of code having Nesting level 7 and 8 will be found
- a. identical blocks of code will be found
- b. block of code having the same DS will be found
- Advanced filtr options for DS

A. Find similar block of code (Results)

RestMine vers. 1.1 - Licensed to: Radek Brazda - InfoTech-Cs						InfoTech-Cs
Object	Results	Identical Code	Decision Structure (DS)	DS + Constants + References	DS + Stmt. Content	Find Objects
appoc.nsp	2	0	2	2	2	CENS27EP.NSP, UM1.NSP
cens15bn.nsn	6	0	6	0	0	LITEATA1.NSP, LITEATA2.NSP, MUEMATE2.NSP, MUEMCTE2.NSP, OLD-ATE2.NSP, ...
cens27ep.nsp	2	0	2	2	2	APPOC.NSP, UM1.NSP
um1.nsp	2	0	2	2	2	APPOC.NSP, CENS27EP.NSP
ciopan20.nsn	1	0	1	0	1	MUFSSN21.NSN
ciopated.nsp	1	0	1	0	1	CNFTATED.NSP
ciopbln0.nsn	1	0	1	1	0	CIOPBLS0.NSN
ciopbls0.nsn	1	0	1	1	0	CIOPBLN0.NSN
ciopida1.nsn	2	0	4	2	0	CIOPIDA2.NSN, CIOPIDA6.NSN
ciopida1.nsn	2	0	4	2	0	CIOPIDA2.NSN, CIOPIDA6.NSN
ciopida2.nsn	2	1	2	0	0	CIOPIDA1.NSN, CIOPIDA6.NSN
ciopida2.nsn	2	1	2	2	0	CIOPIDA1.NSN, CIOPIDA6.NSN

Nesting Level: 8 (8 <= n <= 10)

PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE	PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE			
Total: 1	0	c:\natpgm\dir\cioptp	CIOPIDA1.NSN	2014-03-12 16:53:18	BONOCOR	Total: 2	0	c:\natpgm\dir\cioptp	CIOPIDA2.NSN	2014-05-29 15:42:48	BONOCOR	Decision St
6195	MOVE P-FILM-CODI TO L-S3-40				2674	WRITE '00 ---CARICA SCHEMA DEL PROGRESSIVO TITOLO PASSATO IN INPUT'						
6200	MOVE '00' TO L-S3-CODI-2				2676	L-S3-CODI-2 '=' P-IND-30						
6205	READ CIOP-FILM-RIPAR-VIEW WITH S3-RA-RS-40 EQ L-S3-40				2678	READ CIOP-FILM-RIPAR-VIEW WITH S3-RA-RS-40 EQ L-S3-40						
6210	IF CIOP-FILM-CODI-11 NE L-S3-CODI-11				2680	IF CIOP-FILM-CODI-11 NE L-S3-40						
6215	ESCAPE BOTTOM				2682	ESCAPE BOTTOM						
6220	END-IF				2684	END-IF						
6225	IF CIOP-DEM-CONT-MUSI-CODI = ''				2686	IF CIOP-FILM-CODI-2 <> '00'						
6230	ESCAPE TOP				2688	OR CIOP-DEM-CONT-MUSI-CODI = ''						
6235	END-IF				2690	ESCAPE TOP						
6240*					2692	END-IF						
6245	IF CIOP-DEM-CONT-CODI = '07' OR = '12' OR = '19'				2694*							
6250	AND P-FLAG-RIPARTO = 'A' OR = 'X'				2696	IF CIOP-DEM-CONT-CODI = '07' OR = '12' OR = '19'						
6255	ESCAPE BOTTOM				2698	AND P-FLAG-RIPARTO = 'A' OR = 'X'						
6260	ELSE				2700	ESCAPE BOTTOM						
6265	ADD 1 TO P-IND-30				2702	ELSE						
6270	IF P-IND-30 GT 150 /* 041001				2704	ADD 1 TO P-IND-30						
6275	MOVE '9' TO P-X-RC				2706	IF P-IND-30 GT 150 /* 041001						
6280	ESCAPE BOTTOM				2708	MOVE '9' TO P-X-RC						
6285	END-IF				2710	ESCAPE BOTTOM						
6290	MOVE CIOP-QUAL TO P-AADD-QUAL (P-IND-30)				2712	END-IF						
6295	MOVE CIOP-ESPO-PRGR TO P-AADD-PROGR (P-IND-30)				2714	MOVE CIOP-QUAL TO P-AADD-QUAL (P-IND-30)						
6300	MOVE CIOP-DEM-CONT-MUSI-CODI TO P-AADD-DEM-POSIZ (P-IND-30)				2716	MOVE CIOP-ESPO-PRGR TO P-AADD-PROGR (P-IND-30)						
6305	MOVE CIOP-DEM-CONT-CODI TO P-AADD-DEM-CONT (P-IND-30)				2718	MOVE CIOP-DEM-CONT-MUSI-CODI TO P-AADD-DEM-POSIZ (P-IND-30)						
6310	MOVE CIOP-DEM-QUOT-NUME TO P-AADD-DEM-NUM (P-IND-30)				2720	MOVE CIOP-DEM-CONT-CODI TO P-AADD-DEM-CONT (P-IND-30)						
6315	MOVE CIOP-DEM-QUOT-DENO TO P-AADD-DEM-DEN (P-IND-30)				2722	MOVE CIOP-DEM-QUOT-NUME TO P-AADD-DEM-NUM (P-IND-30)						
6320	MOVE CIOP-SIS-CODI TO P-AADD-SIS-CODI (P-IND-30)				2724	MOVE CIOP-DEM-QUOT-DENO TO P-AADD-DEM-DEN (P-IND-30)						
6325	MOVE CIOP-CAE-CODI TO P-AADD-CAE-CODI (P-IND-30)				2726	MOVE CIOP-SIS-CODI TO P-AADD-SIS-CODI (P-IND-30)						
6330	MOVE *ISN TO P-AADD-ISN (P-IND-30)				2728	MOVE CIOP-CAE-CODI TO P-AADD-CAE-CODI (P-IND-30)						
6335*					2730	MOVE *ISN TO P-AADD-ISN (P-IND-30)						
6340	IF P-AADD-CAE-CODI (P-IND-30) NE ''				2732	WRITE '=> 00 <=' P-IND-30						
6345	AND P-AADD-CAE-CODI (P-IND-30) NE '000000000'				2734	P-AADD-PROGR (P-IND-30)						
6350	MOVE P-AADD-CAE-CODI (P-IND-30) TO L-AADD-POCAE				2736	P-AADD-DEM-POSIZ (P-IND-30)						
6355	RESET L-F-INTERACT				2738	P-AADD-DEM-CONT (P-IND-30)						
6360*					2740	P-AADD-DEM-NUM (P-IND-30)						
6365*	----- LEGGE CODCAE PER CODICE CAE				2742	P-AADD-DEM-DEN (P-IND-30)						
6370*					2744	P-AADD-SIS-CODI (P-IND-30)						
6375	CALLNAT 'IPINOMI'				2746	P-AADD-CAE-CODI (P-IND-30)						
6380	L-AADD-POCAE-N NOMINATIVO-I COGN-NOME-I RETURN-CODE				2748*							
6385	MOVE SUBSTRING(COGN-NOME-I,1,40) TO P-AADD-COGN (P-IND-30)				2750	IF P-AADD-CAE-CODI (P-IND-30) NE ''						
6390	MOVE SUBSTRING(COGN-NOME-I,41,20) TO P-AADD-NOME (P-IND-30)				2752	AND P-AADD-CAE-CODI (P-IND-30) NE '000000000'						
6395*					2754	MOVE P-AADD-CAE-CODI (P-IND-30) TO L-AADD-POCAE						
6400	PERFORM CERCA-NAZ-SU-CNAG				2756	RESET L-F-INTERACT						

Differences

B. Audit - Compare code versions

RestMine - Mining Tool for Natural/Java [Licensed to - InfoTech-Cs]

Find

- Objects
- Items in code
- Block of code
- Similar blocks of code
- Compare code versions**
- System Inventory (CSV file)
- Code Anomaly
- Quality Metrics

Exclude Comments

Differences in comments are not traced

Options

- Quality metrics (loc, V(G), V(G)main, maxNest)
- Anomaly

Shows Metrics values differences

Shows new Anomalies

Not selected anomaly types:

- DEFINE REPORT
- ESCAPE / FETCH with dead code
- ESCAPE BOTTOM as default
- FIND SORTED
- Multiple statements on the same line
- Non structural ESCAPE
- NONE before ANY in DECIDE
- NONE missing
- Objects with unresolved references
- REINPUT with dead code
- Short DECIDE
- Statement number reference
- Unused defined Field
- Unused defined file
- Unused internal subroutines

Selected anomaly types:

- AT TOP/END OF PAGE in IF construct
- Complex logical expression
- Deep nesting
- Different External subroutine name and Mod
- FETCH from subprog. or exter. subr.
- Missing internal subroutines
- Missing objects

Add ->

Remove <-

B. Audit - Compare code versions – Changes in modules (Results)

PREVIOUS NEXT NO FILTER MAXIMIZE UNLOAD SAVE LOAD to RestNet

Total: 19 | 0 | c:\natpdm\compare\2015\src\demindir\murprsn0.nsn | MURPRSN0.NSN | 2014-05-28 10:34:38

```

1380 VALUE 'LISTP2'
1390 SET KEY ENTR NAMED 'P + D'
1400 SET KEY PF7 NAMED 'P -'
1410 MOVE 1 TO L-P-IND-START M-P-NUM-PAG

3680 REINPUT
3690 'Tipo record\slot assente. Digitare "?" per la selezione.'
3700 MARK *M-A-FILLER (CD=RE)
3710 WHEN M-A-NUM-TREC EQ ' '

4370 AND SUBSTRING (M-A-COD-VOCE-SINT,1,2) NE 'RW'
4380 AND SUBSTRING (M-A-COD-VOCE-SINT,1,2) NE 'RJ' /* 280514
4390 AND SUBSTRING (M-A-COD-VOCE-SINT,1,2) NE 'RK' /* 280514
4400 AND SUBSTRING (M-A-COD-VOCE-SINT,1,2) NE 'RH' /* 280514
4410 REINPUT
4420 'Voce sintetica incongruente.RS*,RX*,RY*,RZ*,RJ*,RK*,RH* o RW*'
4430 MARK *M-A-COD-VOCE-SINT (CD=RE)
4440 WHEN NONE

4500 IF *NUMBER (4480) NE 0
4510 REINPUT 'Voce sintetica gi presente in archivio.'
4520 MARK *M-A-COD-VOCE-SINT (CD=RE)
4530 END-IF
    
```

inserted code

Modified code

PREVIOUS NEXT NO FILTER UNLOAD SAVE LOAD to RestNet

Total: 17 | 0 | c:\natpdm\compare\2014\demindir\MURPRSN0.NSN | MURPRSN0.NSN | 2013-01-10 15:12:10

```

1370 VALUE 'LISTP2'
1380 SET KEY ENTR NAMED 'P + D'
1390 SET KEY PF7 NAMED 'P -'
1400 MOVE 1 TO L-P-IND-START M-P-NUM-PAG

3670 REINPUT
3680 'Tipo record slot assente. Digitare "?" per la selezione.'
3690 MARK *M-A-FILLER (CD=RE)
3700 WHEN M-A-NUM-TREC EQ ' '

4360 AND SUBSTRING (M-A-COD-VOCE-SINT,1,2) NE 'RW'
4370 REINPUT 'Voce sintetica incongruente. RS*,RX*,RY*,RZ* o RW*'
4380 MARK *M-A-COD-VOCE-SINT (CD=RE)
4390 WHEN NONE

4450 (S) NE 0
4460 REINPUT 'Voce sintetica già presente in archivio.'
4470 MARK *M-A-COD-VOCE-SINT (CD=RE)
4480 END-IF

4640 IF *NUMBER (4620) NE 0
4650 REINPUT 'Voce già presente in archivio.'
4660 MARK *M-A-COD-VOCE (CD=RE)
4670 END-IF
    
```

B. Audit - Compare code versions – Quality metrics (Results)

Object	Library	Name	Ext	Date: 1	Time 1	Date: 2	Time 2	loc 1	loc 2	loc Delta	V(G): 1	V(G): 2	Delta V(G)	Inserted lines	Inserted blocks	Changed lines
MURPDT90.NSN	demindir	MURPDT90	NSN	1. 7. 2013	12:20:24	1. 7. 2013	11:20:24	609	609	0	60	60	0	0	0	0
MURPRSNO.NSN	demindir	MURPRSNO	NSN	28. 5. 2014	10:34:38	10. 1. 2013	15:12:10	829	824	-5	12	12	0	0	0	0
MUEURN00.NSN	demripbt	MUEURN00	NSN	13. 1. 2011	12:23:26	11. 12. 2008	9:15:08	257	254	-3	24	24	0	0	0	0
MUEURN01.NSN	demripbt	MUEURN01	NSN	17. 7. 2015	16:42:02	21. 5. 2012	14:05:18	90	90	0	0	0	0	0	0	0
MUEURN02.NSN	demripbt	MUEURN02	NSN	17. 7. 2015	16:42:32	21. 5. 2012	14:39:46	10	10	0	0	0	0	0	0	0
MUEURN03.NSN	demripbt	MUEURN03	NSN	10. 7. 2013	11:48:20	4. 1. 2013	12:16:00	11	11	0	3	2	0	0	0	0
MURPJN08.NSN	demripbt	MURPJN08	NSN	4. 11. 2013	13:59:54	11. 1. 2012	9:14:30	31	31	0	1	1	0	0	0	0
MURPGN22.NSN	demripbt	MURPGN22	NSN	5. 5. 2010	11:40:02	29. 1. 2009	14:18:06	96	223	-127	180	34	-194	137	17	163
MURPIN32.NSN	demripbt	MURPIN32	NSN	23. 11. 2009	16:05:50	3. 3. 2009	8:03:54	78	225	-147	137	17	-164	0	0	0
MURPIN6R.NSN	demripbt	MURPIN6R	NSN	17. 5. 2013	12:10:58	27. 1. 2010	16:41:58	124	124	0	0	0	0	0	0	0
MURPINET.NSN	demripbt	MURPINET	NSN	23. 11. 2012	14:11:16	9. 11. 2009	11:46:32	100	99	-1	13	1	-12	0	0	0
MURPINI1.NSN	demripbt	MURPINI1	NSN	21. 11. 2014	15:05:52	9. 12. 2005	10:38:28	11	9	-2	19	4	-18	0	0	0
MURPINUE.NSN	demripbt	MURPINUE	NSN	28. 5. 2015	9:23:34	16. 10. 2008	7:33:14	22	22	0	0	0	0	0	0	0
MURPINVS.NSN	demripbt	MURPINVS	NSN	18. 6. 2015	10:50:10	5. 12. 2013	16:36:10	211	211	0	1	1	0	0	0	0
MURPINR06.NSN	demripbt	MURPINR06	NSN	28. 10. 2015	15:46:02	15. 10. 2004	21:10:28	9	4	-5	16	4	-12	0	0	0
MURPVR19.NSN	demripbt	MURPVR19	NSN	4. 8. 2015	12:22:06	15. 4. 2010	13:56:14	9	9	0	0	0	0	0	0	0
BGCNMT65.NSN	dgonis	BGCNMT65	NSN	24. 7. 2014	12:52:26	28. 11. 2005	11:28:34	8	7	-1	3	1	-2	0	0	0
BGCNXTA1.NSN	dgonis	BGCNXTA1	NSN	24. 9. 2012	9:58:18	28. 11. 2005	11:28:36	3	3	0	4	1	-1	0	0	0
BGCNXT2.NSN	dgonis	BGCNXT2	NSN	24. 2. 2010	13:39:20	24. 2. 2010	12:39:20	207	207	0	0	0	0	0	0	0

B. Audit - Compare code versions – Anomaly (Results)

Source code anomaly	
FIND SORTED	3
Deep nest (max. 7)	0
Complex logical expression (max. 4)	2
FETCH from subprog. or exter. subr.	0
Unit anomaly	
Unused internal subroutines	8

Anomaly: Complex logical expression (max. 4)

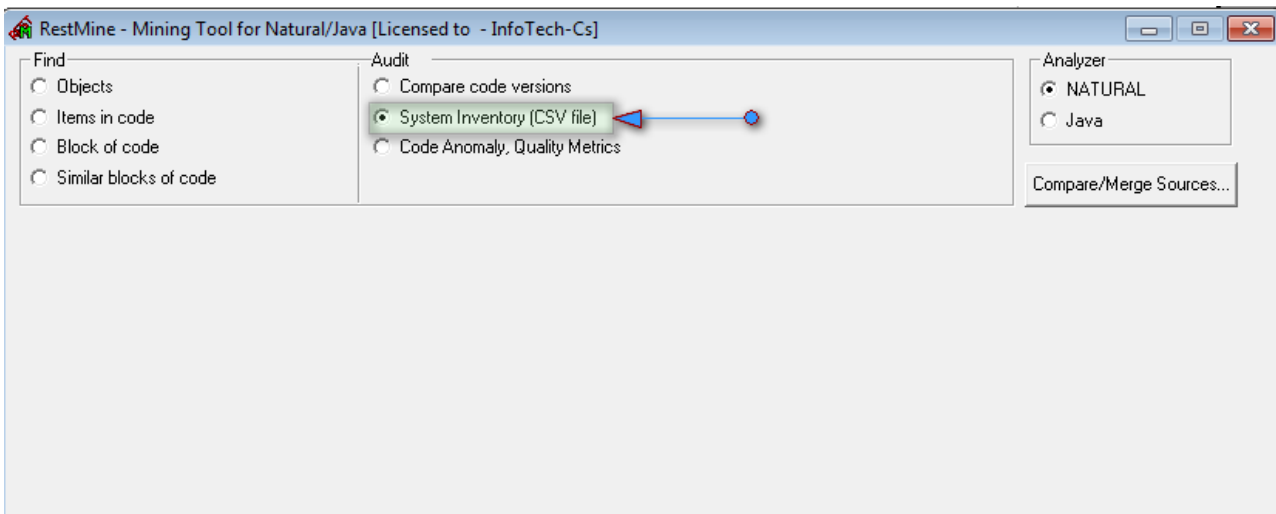
Object	Library	Date 1 / 2	count 1 / 2	Delta
COSRX108.NSN	libnin	23. 10. 2015 16:34:44	1	1
COSRX109.NSN	libnin	7. 7. 2009 16:20:00	0	1
		2015 18:10	1	1
		24. 6. 2009 15:19:00	0	1

```

1660 WHEN COCSMAT-VIEW.STATUS_FINANZIAMENTO_NFI = '6'
1661 IF COCSMAT-VIEW.FLAG_SBLOCCO_PAGAMENTO NE 'Y'
1662 OR COCSMAT-VIEW.DATA_SBLOCCO_PAGAMENTO EQ 0
1663 OR COCSMAT-VIEW.ORA_SBLOCCO_PAGAMENTO EQ 0
1664 OR COCSMAT-VIEW.FLAG_SBLOCCO_STAMPA NE 'N'
1665
1666
1667 OR COCSMAT-VIEW.CODICE_PAGAMENTO EQ ' '
1668 OR COCSMAT-VIEW.ABI_FINANZIATRICE EQ ' '
1669 OR COCSMAT-VIEW.CAB_FINANZIATRICE EQ ' '
1670
1671
1672 OR (COCSMAT-VIEW.FLAG_INVIO_NOTIFICA_FIN NE 'N'
1673 AND COCSMAT-VIEW.FLAG_INVIO_NOTIFICA_FIN NE ' ')
1674 OR COCSMAT-VIEW.DATA_INVIO_NOTIFICA_FIN NE 0
1675 OR COCSMAT-VIEW.ORA_INVIO_NOTIFICA_FIN NE 0
1676
1677
1678
1679

```

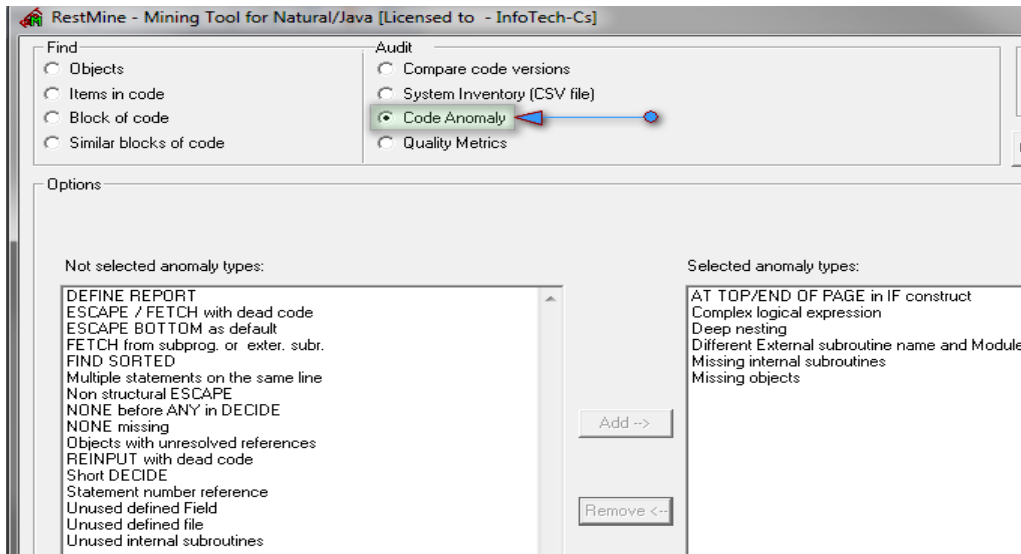
B. Audit - System Inventory



B. Audit - System Inventory - internal subroutines (Results)

	A	B	C	D	E	F	G	H	I
1	Library	Name	Ext	Date	Time	UnitName	line	V(G)	
2	cens	APPO15BP	NSP	24.1.1995	13:41:02	ROTTURA-KEY	72	11	
3	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-SEDE	15	2	
4	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-AGENZIA	29	3	
5	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-COMUNE	17	2	
6	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-DENM-Z1	40	1	
7	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-DENM-Z2	61	6	
8	cens	APPO15BP	NSP	24.1.1995	13:41:02	CERCA-DENM-Z2	62	6	
9	cens	APPO15BP	NSP	24.1.1995	13:41:02	DECODI	20	4	
10	cens	APPO15BP	NSP	24.1.1995	13:41:02	CARICAMENTO	191	30	
11	cens	APPO15BP	NSP	24.1.1995	13:41:02	FINE	120	5	
12	cens	APPOC	NSP	1.7.1996	15:48:08	ROTTURA-KEY	73	11	
13	cens	APPOC	NSP	1.7.1996	15:48:08	CERCA-SEDE	16	2	
14	cens	APPOC	NSP	1.7.1996	15:48:08	CERCA-AGENZIA	30	3	
15	cens	APPOC	NSP	1.7.1996	15:48:08	CERCA-COMUNE	18	2	
16	cens	APPOC	NSP	1.7.1996	15:48:08	MATCH	45	1	
17	cens	APPOC	NSP	1.7.1996	15:48:08	CERCA-DENM-Z1	62	6	
18	cens	APPOC	NSP	1.7.1996	15:48:08	CERCA-DENM-Z2	72	9	
19	cens	APPOC	NSP	1.7.1996	15:48:08	DECODI	23	4	
20	cens	APPOC	NSP	1.7.1996	15:48:08	CARICAMENTO	528	90	
21	cens	APPOC	NSP	1.7.1996	15:48:08	TRATTA-CATEG	23	7	
22	cens	APPOC	NSP	1.7.1996	15:48:08	FINE	30	5	
23	cens	APPOCENS	NSP	24.1.1995	13:40:58	TRATTA-DENOMINAZIONE	63	12	
24	cens	APPOCENS	NSP	24.1.1995	13:40:58	CONTROLLA-ORGANIZZATORE	56	8	
25	cens	APPOCENS	NSP	24.1.1995	13:40:58	COMPATTAMENTO	14	3	
26	cens	APPOCENS	NSP	24.1.1995	13:40:58	SCRIVI-ADA	142	2	

B. Audit – Code Anomaly



B. Audit – Code Anomaly (Results)

Code Anomaly, Quality Metrics	
Source code anomaly	
Deep nesting	1
Complex logical expression	3
REINPUT with dead code	1
Unit anomaly	
Unused internal subroutines	31
Missing internal subroutines	0

Anomaly: REINPUT with dead code

Object	Date	count
DOOPATE1.NSP	23.11.2012 13:47:28	1

Library: dor

PREVIOUS NEXT NO FILTER UNLOAD SAVE LOAD to RestNat

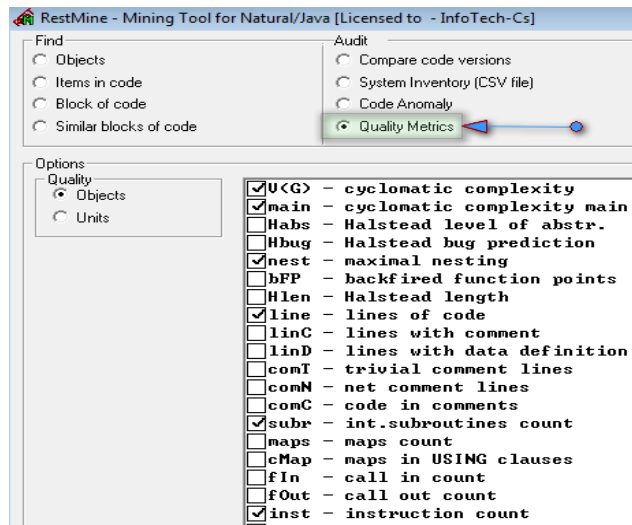
Total: 1 0 DOOPATE1.NSP c:\natpgm\compare\2015\src\dor\doopate1.nsp 2012-11-23 13:47:28

```

2940 REINPUT '0410 - OPERA NON GESTIBILE PERCHE" ANNULLATA'
2950 REINPUT '0410 - OPERA ANNULLATA'
2960 END-IF

```

B. Audit – Quality Metrics

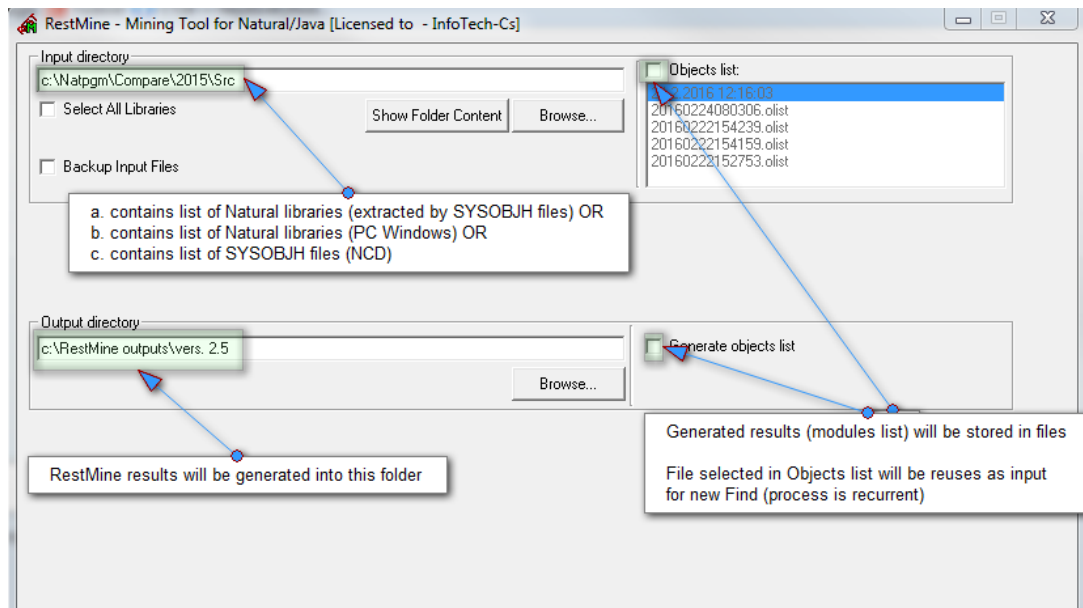


B. Audit – Quality Metrics (Results)

Object Quality Metrics										
Library	Object	Date	Time	V(G)	main	nest	line	subr	maps	inst
dor	COPYABS1.NSP	14.2.2013	10:18:14	234	26	6	1435	30	1	701
dor	COPYITE3.NSP	20.2.2013	11:34:38	252	101	10	1972	15	5	1169
dor	COPYITEI.NSP	25.1.2013	10:50:54	68	2	6	359	4	0	216
dor	COPYITEN.NSP	25.1.2013	11:05:18	64	6	6	334	2	0	213
dor	COPYITEP.NSP	25.1.2013	11:05:28	105	20	5	726	11	2	481
dor	COPYTEAT.NSP	27.1.2014	11:40:28	51	1	7	688	6	0	296
dor	DOCNYB03.NSP	20.2.2014	11:12:38	84	64	7	726	2	1	413
dor	DOEMATE0.NSN	23.9.2014	14:17:16	45	16	4	396	3	0	166
dor	DOEMATE1.NSP	21.1.2014	12:57:50	160	14	8	841	11	1	393

C. RestMine – Settings

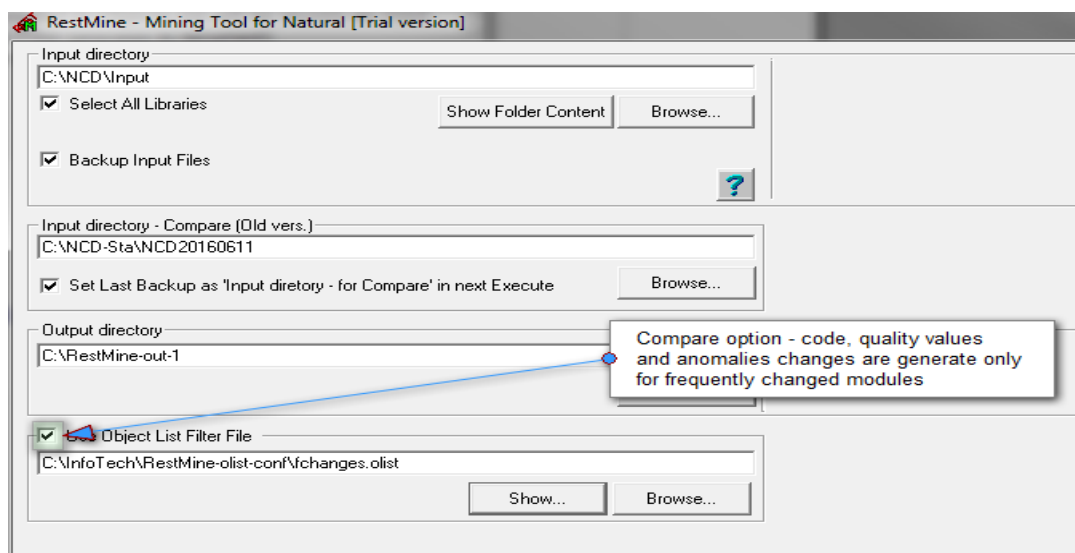
Select input/output



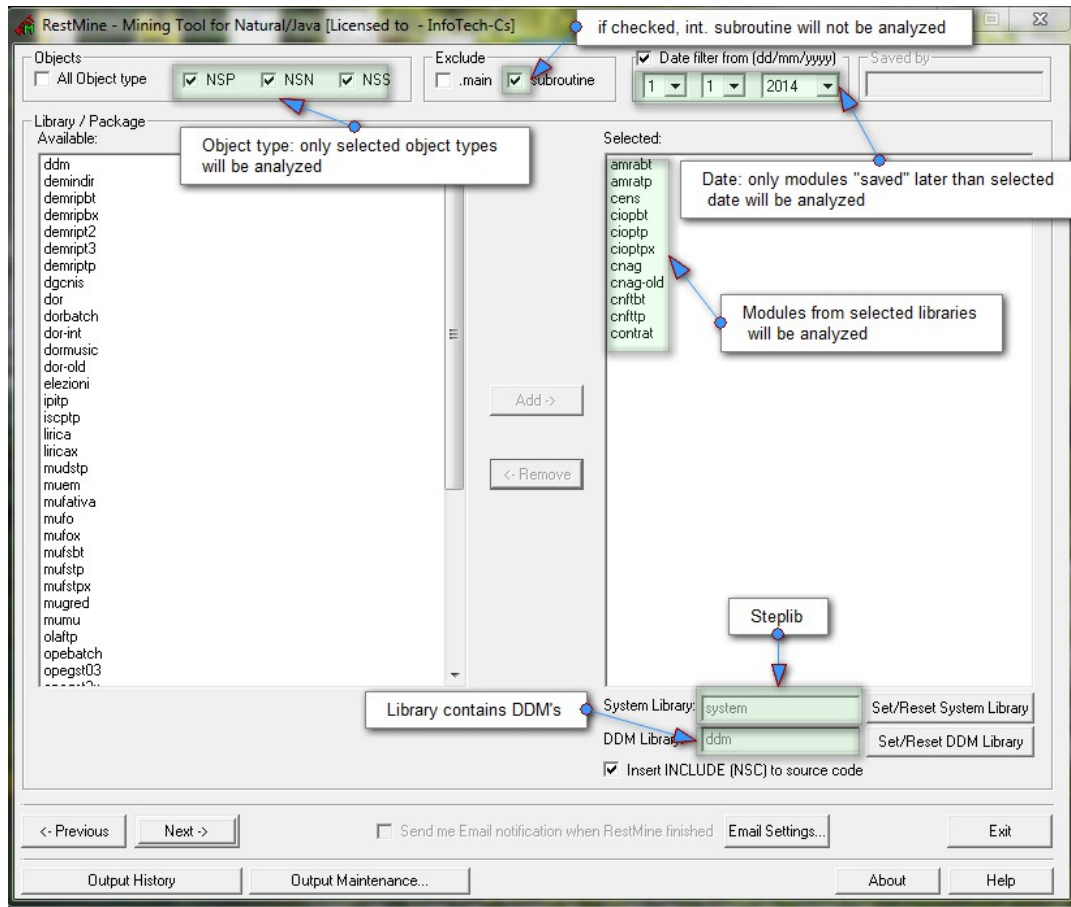
Frequently Changed Modules (fchanges file)

Running RestMine(Compare option) the fchanges file is automatically updated for each Compare execution.

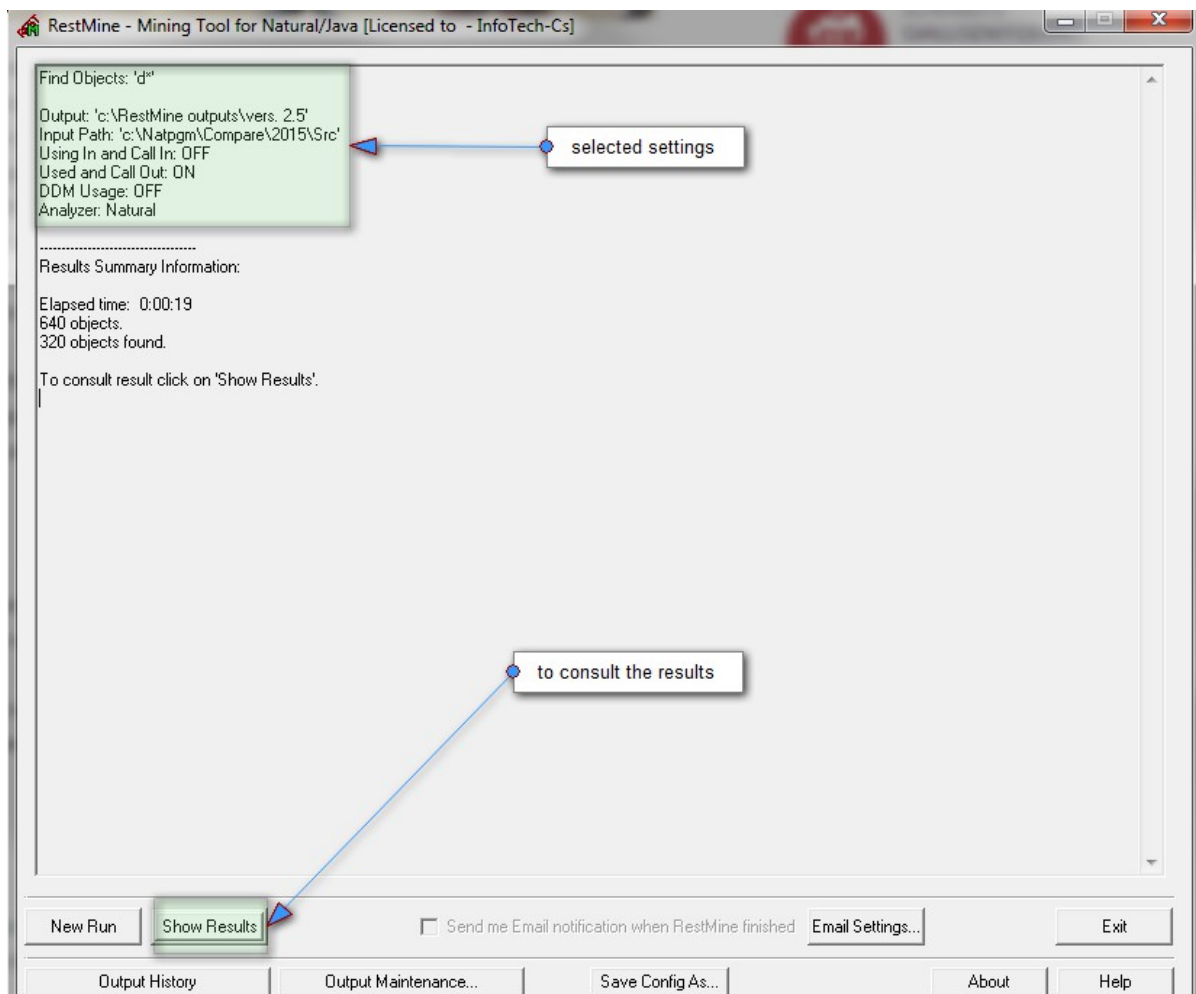
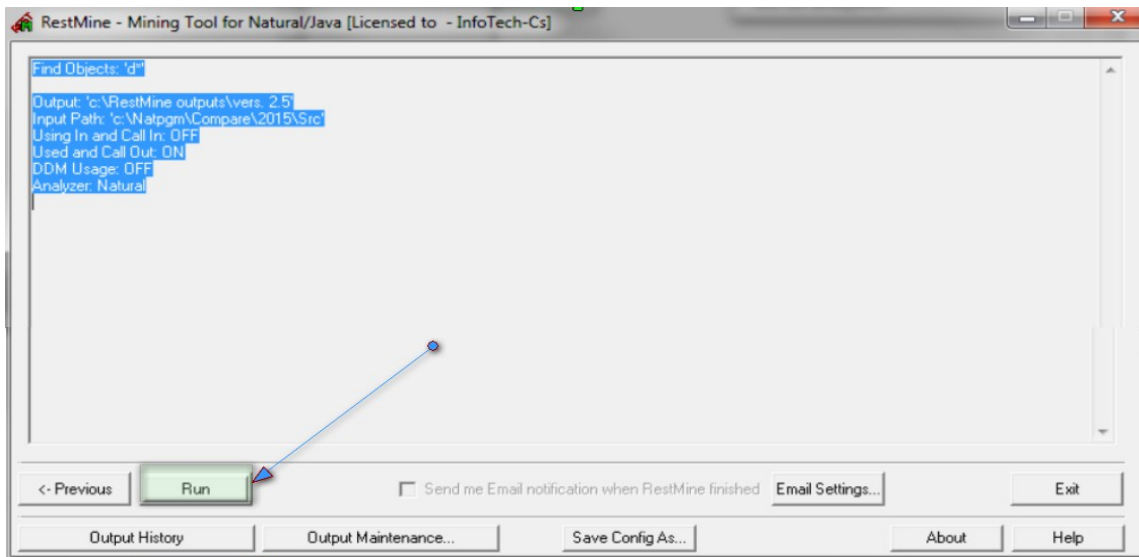
20160607173530	7.6.2016 17:37	File folder	
Help	6.6.2016 17:58	File folder	
Images	6.6.2016 17:58	File folder	
Jar	6.6.2016 17:58	File folder	
obj	6.6.2016 18:00	File folder	
tbl	6.6.2016 18:00	File folder	
20160607173530.rmcfg	7.6.2016 17:35	RMCFG File	8 KB
fchanges.cfg	7.6.2016 17:37	CFG File	5 KB
fchanges	7.6.2016 17:37	OLIST File	5 KB
fchanges	7.6.2016 17:37	TBL File	41 KB
FINOCCH.users	7.6.2016 17:37	USERS File	1 KB



Filters



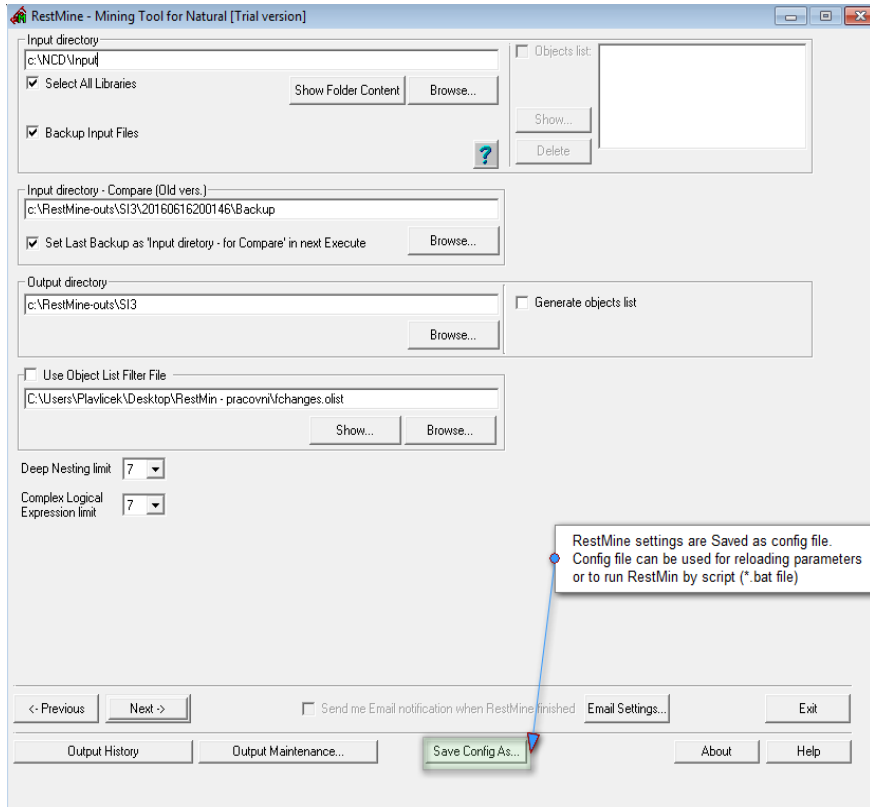
Run RestMine



Run RestMine - bat file script (task scheduler)

```
RestMineG-task - Notepad
File Edit Format View Help
REM RestMine script (Task scheduler)
REM
REM param *.rmcfg - configuration file (RestMine - Load Config)
REMXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
C:\InfoTech\RestMine\RestMine.exe C:\RestMine-outs\SI3\20160607180852.rmcfg
pause
```

to create *.rmcfg (config.) file



Multiple RestMine execution - bat file script (task scheduler)

```
RestMineG-2015-16-jpa.txt x
REM RestMine in Bat mode (Task scheduler)
REM
REM param *.rmcfg - configuration file (RestMine - Load Config)
REMXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
REM Delete all NCD file
REM erase /Q C:\Ncd\Input\*.*
REM
REM COPY NCD file to RestMine INPUT folder
REM copy /Y C:\Natpgm\NCD\NCD20020223\*.NCD C:\Ncd\Input
REM
REM launch RestMine in Bat mode
REM C:\InfoTech\RestMine\RestMine.exe C:\RestMine-outs\SI3\20160607180852.rmcfg
REM
REM 1 RUN
erase /Q C:\Ncd\Input\*.*
copy /Y C:\Natpgm\NCD\NCD20150529\*.NCD C:\Ncd\Input
C:\InfoTech\RestMine\RestMine.exe C:\RestMine-outs\SI3\20160607180852.rmcfg
REM
REM 2 RUN
erase /Q C:\Ncd\Input\*.*
copy /Y C:\Natpgm\NCD\NCD20150530\*.NCD C:\Ncd\Input
C:\InfoTech\RestMine\RestMine.exe C:\RestMine-outs\SI3\20160607180852.rmcfg
REM
REM 3 RUN
erase /Q C:\Ncd\Input\*.*
copy /Y C:\Natpgm\NCD\NCD20151003\*.NCD C:\Ncd\Input
C:\InfoTech\RestMine\RestMine.exe C:\RestMine-outs\SI3\20160607180852.rmcfg
pause
```

D. RestMine – Others

[Disable the IE ActiveX message:](#)

<http://stackoverflow.com/questions/18979813/ie-permissions-required-for-activex-controls>

RestMine → RestNat (default type of file)

The screenshot shows the RestMine application interface. On the left, there is a 'Settings' panel with the path 'c:\natpgm\compare\2015\Src'. Below it is an 'Object Find' table:

Object	Library	Date	Inter. Subr.
ESTRCIN3.NSP		23.5.2008	CONTROLLO-PIANO-RIPARTO CERCA-TITOLO-EPI CERCA-TITOLO-TRONCO RICERCA-RIPAR RICERCA-SEZIO-CINEMA RICERCA-QUALI-CINEMA INSERISCI

A note below the table says: 'Note: Choose RestNat as default program for opening nsp type of files'. The main window displays a file explorer view of 'ESTRCIN3.NSP' and a 'Flow graph: estrcin3/main' on the right, which is a complex diagram with nodes and arrows.

RestMine → RestNat (ActiveX)

PREVIOUS	NEXT	NO FILTER	MAXIMIZE	UNLOAD	SAVE	LOAD to RestNat	PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE	LOAD to RestNat
Total: 5	0	ESTRMINE.NSP				c:\natpgm\compare\2015\src\cnag\ciutm101.nsp	2014-09-11 15:39:18	Total: 5	0	ESTRMINE.NSP		
1470						MOVE 30 TO P-DURATA	1460					MOVE 30 TO P-DURATA
1480						MOVE '//CIUTM101 JOB (1070),' ',',CLASS=T,' TO T-SKEDA	1470					MOVE '//CIUTM101 JOB (1060),' ',',CLASS=T,' TO T-SKEDA
1490						MOVE 'PDF' TO T-STMP /* 110914	1480					MOVE 'LASE' TO T-STMP
1500*							1490*					
1650*						----- INTESTA	1580*					
1660						MOVE 'PDF' TO T-STMP /* 110914	1590					IF L-NUM-COPIE EQ 0
1670						COMPUTE I = I + 1	1600					REINPUT 'XXXX - INSERIRE IL NUMERO DI COPIE' MARK 3
2440						COMPUTE I = I + 1	1610					END-IF
2450						MOVE '//CMPRT02 DD SYSOUT= ,COPIES= ,CHARS=GF15,FCB=F09S'	1620*					SET CONTROL 'WB'
2460						TO T-SKEDA-STMP	1630					
2470						MOVE 1 TO N-COPI-STMP	1640*					----- INTESTA
2490						MOVE T-SKEDA-STMP TO P-T-SKEDA(I)	1640*					----- INTESTA
2500						COMPUTE I = I + 1	1650					MOVE 'LASE' TO T-STMP
2510						MOVE '//TAG8CONFIGPDF3LANDSCAPE160_TXT2PDF' /* 110914	1660					COMPUTE I = I + 1
2520						TO P-T-SKEDA(I) /* 110914	2430					COMPUTE I = I + 1
2530						COMPUTE I = I + 1 /* 110914	2440					MOVE '//CMPRT02 DD SYSOUT= ,COPIES= '
2540						MOVE '//SYSIN DD * ' TO P-T-SKEDA(I)	2450					TO T-SKEDA-STMP
							2460					MOVE 1 TO N-COPI-STMP

RestMine → RestMerge

