RFID Microapplication

i-Muse

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Dini Martini
admartin@uth.gr
Alex Zaharis
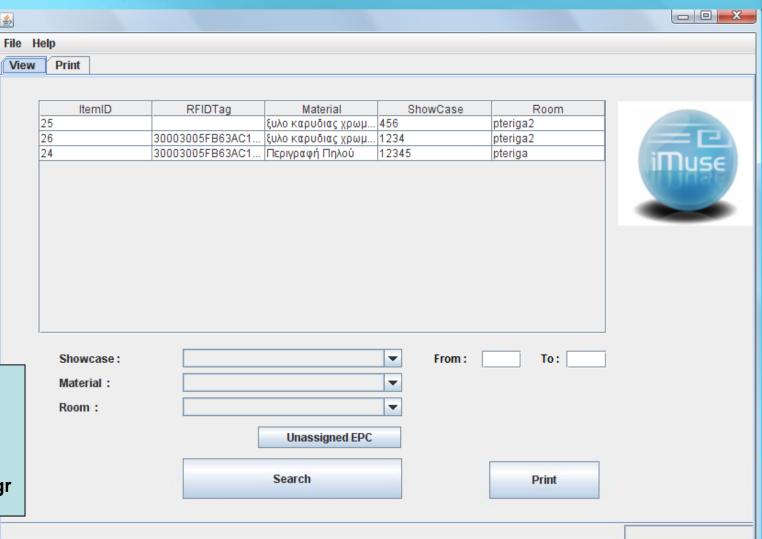alzahari@uth.gr

Application GUI

Programming

Language: **Java**

These are data
Retrieved from
the Remote
Database
Kabamaru.csd.auth.gr

File   Help

| | View | Print |

ItemID	RFIDTag	Material	ShowCase	Room
25		ξυλο καρυδιας χρωμ...	456	pteriga2
26	30003005FB63AC1...	ξυλο καρυδιας χρωμ...	1234	pteriga2
24	30003005FB63AC1...	Περιγραφή Πηλού	12345	pteriga

Showcase :   From :   To :

Material :

Room :

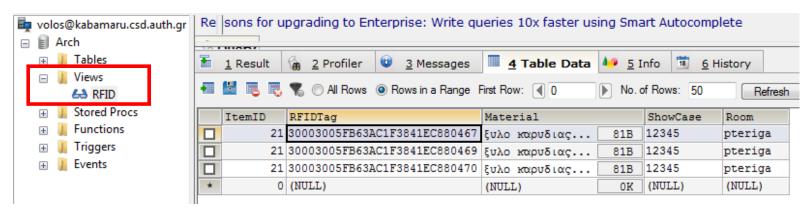Unassigned EPC

Search   Print

SQL Query & View

- SELECT itm.id AS ItemID,RFID.rfid AS RFIDTag,t.content AS Material,
ShCas.Code AS ShowCase,rooms.code AS Room
FROM descriptions_relMaterialsTexts relMatTxt
INNER JOIN materials mat ON relMatTxt.materials_id = mat.id
INNER JOIN texts t ON relMatTxt.texts_id = t.id
INNER JOIN relItemsMaterials relItmMat ON relMatTxt.materials_id =
relItmMat.materials_id
INNER JOIN items itm ON relItmMat.items_id = itm.id
INNER JOIN relShowcasesItems relSitm ON itm.id=relSitm.items_id
INNER JOIN showcases ShCas ON relSitm.showcases_id=ShCas.id
INNER JOIN reslShowcasesRfidtags relShRF ON relShRF.showcases_id = ShCas.id
INNER JOIN rfidtags RFID ON RFID.id=relShRF.rfidtags_id
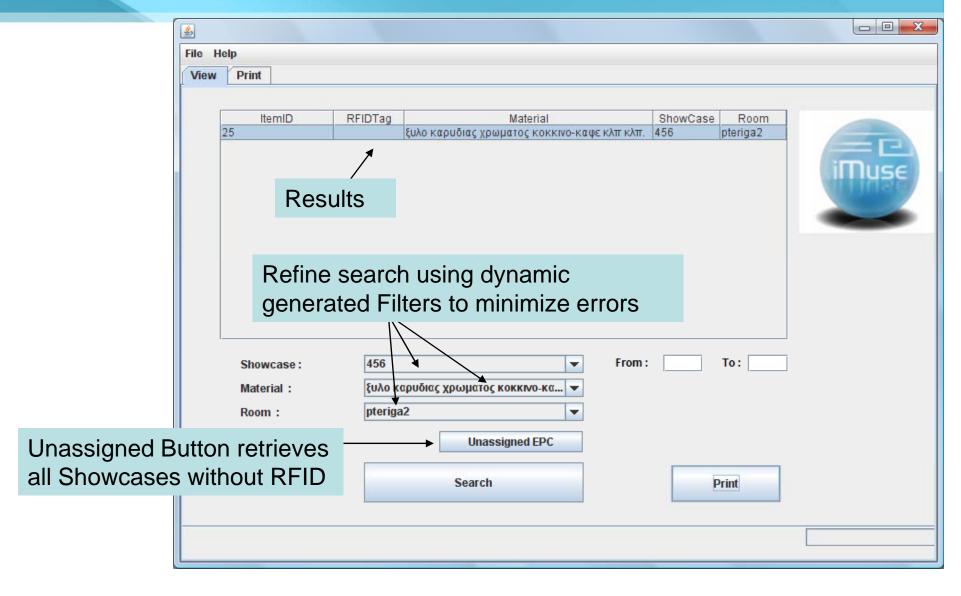INNER JOIN relRoomsShowcases relRmSh ON relRmSh.showcases_id=ShCas.id

  INNER JOIN rooms ON rooms.id=relRmSh.rooms_id

• Created Mysql view (name:"RFID") in order not to repeat this complex query.

Refine Search

Results

Refine search using dynamic generated Filters to minimize errors

Unassigned Button retrieves all Showcases without RFID

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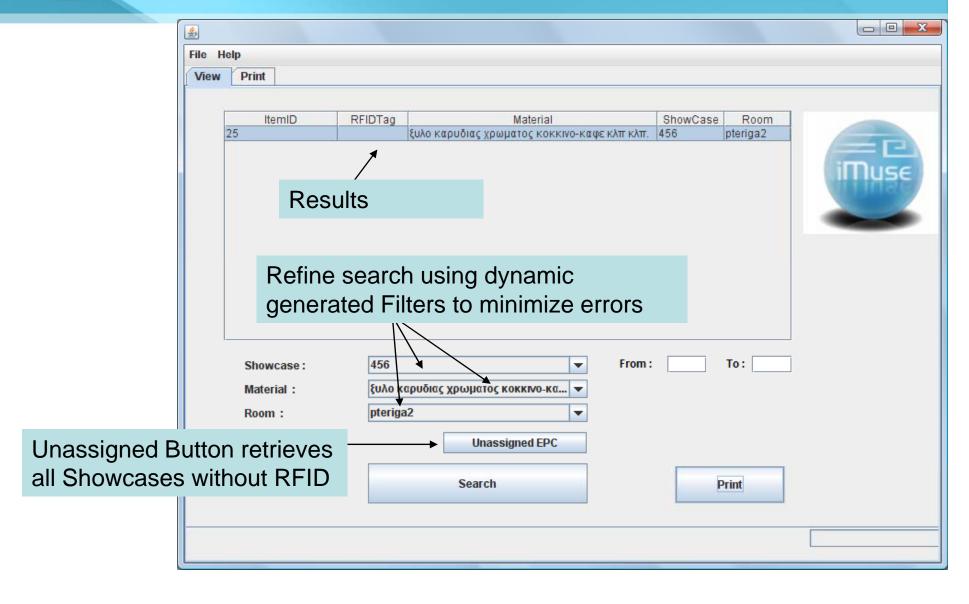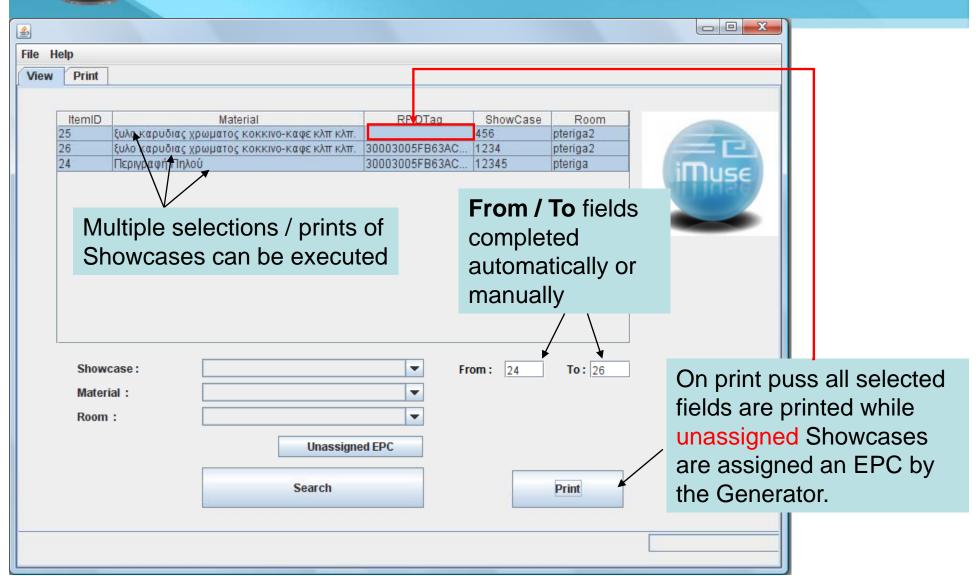
Rfid Printer Interface

- RFID Generate EPC option is implemented and activated.

- RFID print option is implemented and activated.

- RFID print must be tested with real RFID printer.
  (Printronix, **SL4M**)

Printing RFIDs

ItemID	Material	RFIDTag	ShowCase	Room
25	ξυλο καρυδιας χρωματος κοκκινο-καφε κλπ κλπ.		456	pteriga2
26	ξυλο καρυδιας χρωματος κοκκινο-καφε κλπ κλπ.	30003005FB63AC...	1234	pteriga2
24	Περιγραφη Πηλού	30003005FB63AC...	12345	pteriga

Multiple selections / prints of Showcases can be executed

From / To fields completed automatically or manually

On print puss all selected fields are printed while unassigned Showcases are assigned an EPC by the Generator.

Showcase :

Material :

Room :

From : 24   To : 26

Unassigned EPC

Search

Print

Settings.xml

?=? xml	version="1.0" encoding="UTF-8"	
e settings	(printerSettings, databaseSettings?)	
@ xmlns:xsi	http://www.w3.org/2001/XMLSchema-instance	
@ xsi:noNamespaceSchemaLocation	settings.xsd	
e printerSettings	(ip, port, path)	
e ip	169.254.85.20	
e port	9100	← Rfid Printer settings
e path	resources/pgls/AWS.pgl	
e databaseSettings	(ip, port, username, password, schema)	
e ip	kabamaru.csd.auth.gr	
e port	3306	
e username	volos	← Database settings
e password	▓▓▓▓▓▓▓▓	
e schema	Arch	

Database discussion!

- Transformation of SQL View in TopLink Essentials JPA query is problematic due to the fact that SQL view to JTable binding is not supported.

- The design of the database leads to complex queries (10 joins for data from 5 different tables) that leads to slow data retrieval process for a large number of entries.

- (Foreign keys can be used instead of XrelY tables)