e-Granthalaya
A Digital Agenda for Library Automation and Networking

Data Migration Guide

1. Comments

e-Granthalaya software, at present, does not have an Import Interface, therefore, this document provides the guidelines to import the library catalog/records from various sources and other databases like ms access files, text files, **ISO: 2709, MARC**, etc. These guidelines will help the users to migrate their existing records from various sources. However, nic will add the IMPORT features (from **MARC, MARCXML, ISO: 2709**, etc) in the **e-Granthalaya** software in near future

e-Granthalaya Software uses the **MS SQL Server 2005** for its backend where a well defined structure of database is already there. First of all, users have to study the structure of the Source database and then he/she can try to import the data into the various tables of the **e-Granthalaya** database as given below. To start the migration, first **GRANTH3** database must be re-stored in SQL Server 2005 or higher.

2. Database Master Tables – No Import required

Following tables of e-Granthalaya store the system/master values which are not required to import from source database:

S.N	Master Tables	Comments
1.	ACC_MATERIALS	Contains records for Accompanying Materials with unique ACC_MAT_CODE – have relationships in CATS and HOLDINGS Tables as ACC_MAT_CODE Filed, optional in both the related tables
2.	ACQ_MODES	Store Acquisition Modes with unique ACQMODE_CODE. This field has relationships in ACQUISITIONS Table in the same name of field, optional not mandatory. Default Value for Books Purchase is P (Purchase)
3.	BIB_LEVELS	Store Bibliographic Levels, M=Monographs and Books; S=Serials. Any of these Value M or S must be saved in CATS Table in BIB_CODE Filed while importing the records
4.	BINDINGS	Store Type of Bindings, Related Table is HOLDINGS where default value can be saved ,

		optional
5.	BOOKSTATUS	Store Books/Copies Status. E.g 1=Available as default value must be saved in HOLDINGS Table in the STA_CODE Field, Mandatory
6.	COUNTRIES	Stores unique codes of countries in CON_CODE field, related Table is CATS, optional.
7.	CURRENCIES	Stores unique codes of Currencies in CUR_CODE, related table is ACQUISITIONS, optional
8.	DOC_TYPES	Stores unique Codes of Documents Types in the DOC_TYPE_CODE, related Table is CATS, default value in CATS are BK for Books (M/B) and JR For Journals (S/P), mandatory
9.	FREQUENCIES	List Frequencies of Journals stores unique value in FREQ_CODE. Related Table is SUBSCRIPTIONS, optional
10.	LANGUAGES	Stores unique LANG_CODE, Related Table is CATS where Default Value ENG can be saved in the LANG_CODE field
11.	MATERIALS	Stores unique Materials Types in MAT_CODE filed, Related Table is CATS in MAT_CODE Field where default value B (For Books(M)) and P for Serials(S)
12.	PHYSICAL_FORMATS	Stores unique code for Physical formats of the documents in FORMAT_CODE, related table is CATS, PT is the Default Value=Print
13.	REGIONS	Contains unique code of Geographical Regions , related Table is COUNTRIES

Fig.1: List of Master Tables

NOTE: All these database Tables store the records with Auto-generated ID and Unique CODE. Unique CODE is used to make reference to the User Tables in the corresponding fields as **Foreign Key**.

3. IMPORT OF CATALOG DATA

Following database tables are required to import the Catalog data from source databases in the same Order:

1. LIBRARIES: First add one Record in this table by Opening it either manually or by importing from Source database. Create a Unique LIBRARY CODE for each record e.g NICLIB, SERCLIB (10 Char, Alpha-numeric). The LIB_CODE must be saved at least in USERS and HOLDINGS Tables of e-Granthalaya in the LIB_CODE field as Foreign Key.

2. USERS: First create/import the USERS Records from Source database with Unique USER_CODE. USER_ID is record number in ASC order.

Then Import the data from the source database in the following tables of e-Granthalaya:-

3. AUTHORS: Imports all Authors with Unique/no-duplicate Authors names, AUTH_ID is the record number generated automatically in ASC order (1,2,3…n). The AUTH_ID must be saved (as Foreign Key) in the CATS Tables fields with each catalog record i.e. AUTH_ID1, AUTH_ID2, AUTH_ID3 to the corresponding authors to represent the Authors

4. PUBLISHERS: Similarly import all the Publishers in this table of e-G3 by generating a unique, numeric PUB_ID in ASC order which represents the corresponding Publisher in CATS Table PUB_ID Field as foreign key

5. CATS: This is main table where details of the books, etc are stored (except accession number details – copy or holdings data which are stored in HOLDINGS table). On import of the data, a unique, numeric CAT_NO is generated in ASC order which represents the catalog record of a reading materials. This table contains the data for all kinds of reading materials e.g. books, serials, etc. CATS table also contains the pointer/foreign key from other related MASTER Tables given in above heading at s.n. 2. While importing the data from source database, these pointers/foreign keys' default values may be set.

S.N	COLUMN	DATA TYPE	DEFAULT VALUE
1	CAT_NO	Numeric	Primary Key Field with Distinct Value
2	LANG_CODE	3 chr	"ENG"
3	BIB_CODE	1 chr	"M"
4	MAT_CODE	1 chr	"B"
5	DOC_TYPE_CODE	2 chr	"BK"
6	STANDARD_NO	20 varchar	ISBN/ISSN
7	TITLE	255 nVarChar	
8	SUB_TITLE	255 nVarChar	
9	VAR_TITLE	255 nVarChar	
10	AUTH_ID1	Integer	AUTH_ID of Corresponding Author from AUTHORS Table
11	AUTH_ID2	Integer	AUTH_ID of Corresponding Author from AUTHORS Table
12	AUTH_ID3	Integer	AUTH_ID of Corresponding Author from AUTHORS Table
13	CORPORATE_AUTHOR	255 nVarChar	

14	EDITOR	255 nVarChar	
15	TRANSLATOR	255 nVarChar	
16	ILLUSTRATOR	255 nVarChar	
17	EDITION	100 NVarChar	
18	PLACE_OF_PUB	100 NVarChar	
19	PUB_ID	Integer	PUB_ID of Corresponding Publisher from PUBLISHERS Table
20	YEAR_OF_PUB	4 Numeric	"yyyy" numeric value
21	FORMAT_CODE	2 VarChar	PT (Relationship with PHYSICAL_FORMATS Table
22	ACC_MAT_CODE	10 VarChar	Relation with ACC_MATERIALS Table
23	SERIES_TITLE	255 nVarChar	
24	SERIES_EDITOR	255 nVarChar	
25	NOTE	255 nVarChar	
26	SUB_ID	Int	SUB_ID of Corresponding Subject from SUBJECTS Table
27	KEYWORDS	255 nVarChar	
28	DATE_ADDED	MM/dd/yyyy	"mm/dd/yyyy" date value/current date
29	USER_CODE	10 NVarChar	USER_CODE of Corresponding User from USERS Table
30	DATE_MODIFIED	MM/dd/yyyy	
31	ABSTRACT	4000 nVarChr	
32	CAT_LEVEL	50 VarChar	"Full"
33	MULTI_VOL	N/Y	"N" or "Y"
34	TOTAL_VOL	9 Numeric	
35	SP_NO	100 NVarChar	
36	SP_ISSUE_BODY	255 NVarChar	
37	REPORT_NO	100 NVarChar	
38	MANUAL_NO	100 NVarChar	
39	MANUAL_VER	50 VarChar	
40	REFERENCE_NO	255 NVarChar	
41	URL	255 nVarChar	
42	PATENT_INVENTOR	255 NVarChar	
43	PATENTEE	100 NvarChar	
44	PATENT_NO	100 NVarChar	
45	REPRINTS	255 nVarChar	
46	PHOTO	Image	

47	CON_CODE	3 VarChar	CON_CODE of Corresponding Country from COUNTRIES Table
48	CONF_NAME	255 nVarChar	
49	TR_FROM	255 nVarChar	
50	TR_TO	255 nVarChar	
51	UPDATED_BY		
52	DELETED_BY		
53	DELETED	N/Y	
54	LIB_CODE	10 NVarChar	LIB_CODE of Corresponding Library from LIBRARIES Table

Fig.2: Structure of CATS Table

Red color = Mandatory Fields

6. HOLDINGS: This table stores the COPY/Holding data (accession numbers details) along with the CAT_NO pointer/foreign key of the corresponding records in CATS table. Some important fields can be set to default values, e.g. in STA_CODE field "1" may be saved which is for "Available" status in the BOOKSTATUS Master table. HOLD_ID is the primary key generated automatically as record number, numeric and in ASC order

S.N	COLUMN	DATA TYPE	DEFAULT VALUE
1	HOLD_ID	Numeric	Primary Key Field with Distinct Value
2	CAT_NO	Numeric	Corresponding CAT_NO from CATS Table
3	ACQ_ID	Numeric	Corresponding ACQ_ID from ACQUISITIONS Table where Purchasing records are stored
4	ACCESSION_NO	50 Alpha-Numric	
5	ACCESSION_DATE	Date (MM/dd/yyyy)	
6	VOL_NO	50 varchar	
7	VOL_TITLE	255 nVarChar	
8	VOL_EDITORS	255 nVarChar	
9	CLASS_NO	150 nVarChar	
10	BOOK_NO	50 NVarChar	
11	PAGINATION	100 NvarChar	
12	COLLECTION_TYPE	1	C/R (C=Circulation/ R=Reference)
13	PHYSICAL_LOCATION	50 nVarChar	
14	STA_CODE	10 VarChar	Corresponding STA_CODE (Status)

			from BOOKSTATUS Table , Default Value=1 (for Available)
15	BIND_CODE	10 VarChar	Corresponding BIND_CODE from BINDINGS Table
16	ACC_MAT_CODE	10 VarChar	Corresponding ACC_MAT_CODE from ACC_MATERIALS Table
17	SEC_CODE	10 VarChar	Corresponding value from SECTIONS Table
18	LIB_CODE	10 VarChar	Unique LIB_CODE from LIBRARIES Table
19	COPY_ISBN	20 VarChar	
20	REFERENCE_NO	255 NVarChar	
21	DATE_ADDED	Date(MM/dd/yyyy)	
22	USER_CODE	10 VarChar	Relation with USERS Table
23	DATE_MODIFIED	Date (MM/dd/yyyy)	
24	REMARKS	255 nVarChar	
25	BARCODE_NO	Numeric	
26	ISSUE_NO	100 NVarChar	
27	SHOW	1VarChar	Y/N
28	ISSUEABLE	1 VarChar	Y/N
29	MISSING_ISSUES	10 VarChar	
30	JYEAR	Integer	
31	PERIOD	100 VarChr	
32	UPDATED_BY	10 VarChar	
33	DELETED_BY		
34	DELETED	1 VarChar	N

Fig.3: Structure of HOLDINGS Table

4. IMPORT OF ACQUISITION DATA

Following Tables are related with the Acquisition / Purchasing Data – optional

1. VENDORS: This table stores the Records for Vendors with unique, numeric VEND_ID which must be stored in the ACQUISITIONS Table in the corresponding record in VEND_ID.

2. ACQUISITIONS: This Table stores purchasing of books data and subscriptions data of serials. In case you need to import data in this table, a

unique, numeric ACQ_ID will be generated in ASC order. Each record in this table belongs to a unique CAT_NO in the CATS Table and unique LIB_CODE must be saved with each ACQ Record. The Details of the Table given below:

ACQUISITIONS
🔑 ACQ_ID
CAT_NO
LIB_CODE
APP_NO
APP_DATE
VEND_ID
APP_MEMO_NO
APP_MEMO_DATE
VOL_NO
COPY_PROPOSED
CUR_CODE
ITEM_PRICE
SET_PRICE
SOURCE_OF_INFO
RECOMMENDED_BY
RECOMMENDED_DATE
COM_CODE
NOTE
PROCESS_STATUS
REFERENCE_NO
DATE_ADDED
USER_CODE
DATE_MODIFIED
COPY_APPROVED
ORDER_NO
ORDER_DATE
COPY_ORDERED
GRACE_PERIOD
COPY_RECEIVED
ACQMODE_CODE
COPY_ACCESSIONED
INV_NO
ITEM_RUPEES
INV_DATE
CHEQUE_NO
CHEQUE_DATE
SUBS_YEAR
UPDATED_BY
DELETED_BY
DELETED

	Entity Name	ACQUISITIONS			
	Entity Description	It has all Acquisition information of records used in different modules of this software (without sys val) – Library Specific Records			
Sr.No	Attribute	Type	Length	MO	Remarks
1.	ACQ_ID	Numeric	9	M	It's System generated & primary key.
2.	CAT_NO	Numeric	9	M	Not Allowed Null (FK - CATS)
3.	LIB_CODE	nVarchar	10	M	Not Allowed Null (FK- LIBRARIES)
4.	APP_NO	nVarchar	100	O	Allowed Null
5.	APP_DATE	Datetime	8	O	Allowed Null
6.	VEND_ID	Int	4	O	Allowed Null (FK-VENDORS)
7.	APP_MEMO_NO	nVarchar	100	O	Allowed Null
8.	APP_MEMO_DATE	Datetime	8	O	Allowed Null
9.	VOL_NO	Varchar	50	O	Allowed Null
10.	COPY_PROPOSED	Int	4	O	Allowed Null
11.	CUR_CODE	Varchar	3	O	Allowed Null (FK- CURRENCIES)
12.	ITEM_PRICE	Decimal	9	O	Allowed Null
13.	SET_PRICE	Decimal	9	O	Allowed Null
14.	SOURCE_OF_INFO	Varchar	50	O	Allowed Null
15.	RECOMMENDED_BY	Numeric	9	O	Allowed Null (FK- MEMBERSHIPS) –MEM_ID
16.	RECOMMENDED_DATE	Datetime	8	O	Allowed Null
17.	COM_CODE	VarChar	10	O	Allowed Null (FK- COMMITTEES)
18.	NOTE	nVarchar	250	O	Allowed Null

19.	PROCESS_STATUS*	Varchar	50	O	Allowed Null (System Values) Requested Approved Rejected Sent for Approval Ordered Received Partially Received Accessioned Partially Accessioned Billed Paid
20.	REFERENCE_NO	nVarchar	250	O	Allowed Null
21.	DATE_ADDED	Datetime	8	O	Allowed Null
22.	USER_CODE	nVarchar	10	O	Allowed Null (FK-USERS)
23.	DATE_MODIFIED	Datetime	8	O	Allowed Null
24.	COPY_APPROVED	Int	4	O	Allowed Null
25.	ORDER_NO	nVarchar	100	O	Allowed Null
26.	ORDER_DATE	Datetime	8	O	Allowed Null
27.	COPY_ORDERED	Int	4	O	Allowed Null
28.	GRACE_PERIOD	Numeric	9	O	Allowed Null
29.	COPY_RECEIVED	Int	4	O	Allowed Null
30.	ACQMODE_CODE	Varchar	1	O	Allowed Null (FK-ACQMODES)
31.	COPY_ACCESSIONED	Int	4	O	Allowed Null
32.	INV_NO	VarChar	100	O	Allowed Null
33.	ITEM_RUPEES	FLOAT	8	O	Allowed Null
34.	INV_DATE	DateTime	8	O	Allowed Null
35.	CHEQUE_NO	VarChar	50	O	Allowed Null
36.	CHEQUE_DATE	DAteTime	8	O	Allowed Null
37.	SUBS_YEAR	Int	4	O	Allowed Null

Fig.4: Structure of ACQUISITIONS Table

5. IMPORT OF CIRCULATION DATA

1. GROUPS: This Table contains list of GROUPS/FACULTIES/DIVISIONS/SECTIONS with unique GRP_ID which must be stored in the MEMBERSHIPS Table in the corresponding column.

	Entity Name	GROUPS			
	Entity Description	It has description about all Groups of the library members used for circulation (Without system values) – Library Specific Records			
Sr.No	Attribute	Type	Length	MO	Remarks
1.	GRP_ID	Int	4	M	It's System generated & Primary key.
2.	GRP_NAME	nVarchar	150	M	Not Allowed Null
3.	GRP_HOD	nVarchar	150	O	Allowed Null
4.	GRP_DESC	nVarchar	250	O	Allowed Null
5.	GRP_REMARKS	nVarchar	250	O	Allowed Null
5.	DATE_ADDED	Datetime	8	O	Allowed Null
6.	USER_CODE	nVarchar	10	O	Allowed Null (FK-USERS)
7.	DATE_MODIFIED	Datetime	8	O	Allowed Null
8.	LIB_CODE	Nvarchr	10	M	Not Allowed Null (FK-LIBRARIES)

Fig.5: GROUPS Table Structure

2. DESIGNATIONS: This table stores the records for all the DESIGNATIONS exist in an organization with unique field/value in DESIG_ID which is a unique, numeric value. This table also store value for following mandatory fields like DESIG_ENTITLEMENT and DESIG_DUE_DAYS

Entity Name	DESIGNATIONS				
Entity Description	It has description about all Designations exist in an organization library is serving – used for circulation (without system values) – Library Specific				
Sr.No	**Attribute**	**Type**	**Length**	**MO**	**Remarks**
1.	DESIG_ID	Int	4	M	It's System generated. User can't edit this field. (Primary Key)
2.	DESIG_NAME	nVarchar	150	M	Not allowed Null.
3.	DESIG_DESC	nVarchar	250	O	Allowed Null
4.	DESIG_ENTITLEMENT	Int	4	M	Not Allowed Null
5.	DESIG_DUE_DAYS	Numeric	9	M	Not Allowed Null
6.	DESIG_FINE	Decimal	9	O	Allowed Null
7.	DESIG_REMARKS	nvarchar	250	O	Allowed Null
8.	DATE_ADDED	Datetime	8	O	Allowed Null
9.	USER_CODE	nVarchar	10	O	Allowed Null (FK-USERS)
10	DATE_MODIFIED	Datetime	8	O	Allowed Null
11.	LIB_CODE	Nvarchr	10	M	Not Allowed Null (FK-LIBRARIES)

Fig.6: DESIGNATIONS Table

4. **MEMBERSHIPS:** This is the main table where Membership details are stored with Unique, system generated, numeric value in MEM_ID. MEM_NO field must store the unique member number of the members with other mandatory fields.

Entity Name			MEMBERSHIPS			
Entity Description			It has all membership information used in different modules of this software. – for circulation – Library Specific Records			
Sr.No	**Attribute**	**Type**	**Length**	**MO**	**Remarks**	
1.	MEM_ID	Numeric	9	M	It's System generated & primary key.	
2.	MEM_NO	Nvarchr	50	M	Not Allowed Null (no duplicate)	
3.	MEM_NAME	nVarchar	150	M	Not Allowed Null	
4.	MEM_RES_ADD	nVarchar	250	M	Not Allowed Null	
5.	MEM_OFF_ADD	nVarchar	250	O	Allowed Null	
6.	MEM_GENDER	Varchar	1	M	Not Allowed Null (M/F)	
7.	GRP_ID	Int	4	M	Not Allowed Null (FK-GROUPS)	
8.	DESIG_ID	Int	4	M	Not Allowed Null (FK-DESIGNATIONS)	
9.	MEM_EMAIL	Varchar	100	O	Allowed Null	
10.	MEM_TELEPHONE	VarChar	100	O	Allowed Null	
11.	MEM_OVERRIDE	Varchar	1	M	Not Allowed Null (Y/N)	
12.	MEM_ADM_DATE	Datetime	8	M	Not Allowed Null	
13.	MEM_CLOSE_DATE	Datetime	8	M	Not Allowed Null	
14.	MEM_REMARKS	nVarchar	250	O	Allowed Null	
15.	DATE_ADDED	Datetime	8	O	Allowed Null	
16.	USER_CODE	nVarchar	10	O	Allowed Null (FK-USERS)	
17.	DATE_MODIFIED	Datetime	8	O	Allowed Null	
18.	SIGNATURE	nVarchar	100	O	Allowed Null	
19.	PHOTO	Image	16	O	Allowed Null	
20.	NOTE	nVarchar	250	O	Allowed Null	
21.	SUB_ID	Int	4	O	Allowed Null (FK-SUBJECTS)	
22.	KEYWORDS	nVarchar	250	O	Allowed Null	
23.	LIB_CODE	Nvarchr	10	M	Not Allowed Null (FK-LIBRARIES)	
24.	MEM_STATUS *	varchr	2	M	Not Allowed Null CU = Current CN = Cancelled CL = Closed	
25.	NO_DUE_DATE	DateTime	8	O	Allowed Null	
26.	MEM_AGE	Numeric	3	O	Allowed null	
27.	SURITY_NAME	Nvarchr	150	O	Allowed null	

28.	MEMB_DATE	DateTime	8	O	Allowed Null
29.	MEMB_IP	NVarChar	50	O	Allowed Null
30.	MEMB_PASSWORD	Nvarchar	50	O	Allowed Null

Fig.7: MEMBERSHIPS Table

5. **CIRCULATION:** This table stores the Circulation Transactions. Each record of circulation transactions contains an automatic generated CIR_ID, numeric in nature. Also, it stores a MEM_ID which represents the member record in the MEMBERSHIPS table and a HOLD_ID from HOLDINGS which represents a copy/holding record

Entity Name	CIRCULATION				
Entity Description	It has all Circulation information used in different modules of this software. – Library Specific Records				
Sr.No	**Attribute**	**Type**	**Length**	**MO**	**Remarks**
1.	CIR_ID	Int	4	M	It's System generated & primary key.
2.	MEM_ID	Int	4	O	Not Allowed Null (FK-MEMBERS)
3.	HOLD_ID	Numeric	9	O	Not Allowed Null (FK-HOLDINGS)
4.	ISSUE_DATE	Datetime	8	O	Allowed Null
5.	ISSUE_TIME	Datetime	8	O	Allowed Null
6.	DUE_DATE	Datetime	8	O	Allowed Null
7.	RETURN_DATE	Datetime	8	O	Allowed Null
8.	RETURN_TIME	Datetime	8	O	Allowed Null
9.	FINE_DUE	Decimal	9	O	Allowed Null
10.	FINE_COLLECTED	Decimal	9	O	Allowed Null
11.	RESERVE_DATE	Datetime	8	O	Allowed Null
12.	RENEW_DATE	Datetime	8	O	Allowed Null
13.	STATUS	Varchar	50	M	Not Allowed Null (Returned Issued Reserved)
14.	DATE_ADDED	Datetime	8	O	Allowed Null
15.	USER_CODE	nVarchar	10	O	Not Allowed Null (FK-USERS)
16.	DATE_MODIFIED	Dtaetime	8	O	Allowed Null
17.	COPY_ID	Int	4	O	Allowed Null (FK-LOOSE_ISSUES_COPIES)
18.	RESERVE_TIME	DateTime	8	O	Allowed Null
19.	REMARKS	Nvarchr	250	O	Allowed Null
20.	LIB_CODE	Nvarchr	10	M	Not Allowed Null (FK-LIBRAREIS)

Fig.8: CIRCULATION

For any clarification / help please contact us

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