GRIN-Global Dictionary of *System* Tables & Fields

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Comments/Suggestions:
Please contact grin-global.feedback@ars-grin.gov with any suggestions or questions related to this document.

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Note

The tables and dataviews referred to in this document are not the GRIN-Global tables and dataviews of primary interest to users who will be inputting and viewing the GRIN-Global germplasm data, but rather the system-related tables or dataviews relevant to GG administrators. Generally, tables and dataviews prefixed with “sys_” or “app_” are system related.

Naming Conventions

Since many GRIN-Global users may not be familiar with GRIN conventions or whose native language is not English, the following rules were followed as closely as possible when naming tables and fields:

- Table and field names use full words instead of abbreviations whenever possible
- Tables that are related logically usually begin with the same word. e.g. accession, accession_name, accession_action, etc.
  - Accession-related tables (accession_*)
  - Inventory-related tables (inventory_*)
  - Order-related tables (order_request_*)
  - Taxonomy-related tables (taxonomy_*)
  - Crop-related tables (crop_*)
  - Citation-related tables (citation_*)
  - Web-related tables (web_*)
  - System tables (sec_* and app_*)
  - Miscellaneous remaining tables (method*, code_*, etc)
- Prefixes and/or suffixes are applied to field names to logically categorize fields with similar functionality: “is_”, “_id”, “_code”, “_date”, etc.

Auditability

All auditable tables in GRIN-Global contain fields explicitly for auditing purposes:

- Who created the record (created_by) and when (created_date)
- Who last modified the record (modified_by) and when (modified_date)
- Who currently owns the record (owned_by) and when they received ownership (owned_date)

These fields are auto-populated by the Middle Tier when data is being saved. The user cannot override the values in these fields. Auditing applies to the cooperator record of the user who manipulated the data, that is, the **created_by**, **modified_by**, and **owned_by** fields contain cooperator_id values.

Generally, the owner of a record is the same UserID who created the record. However, this is not always true. {More information on ownership can be found in the Curator Tool Users Guide under “Ownership.”) The exceptions are:

- Ownership has been transferred since the record was initially created. This is possible only through an explicit transfer of ownership process.

- A record exists in sys_table_relationship that defines an “ownership” relationship with a parent table. The “owner” of the newly created record will be assigned the same value as the **owned_by** field value in the parent table record. For example, an accession_action record will be marked as being owned by the owner of the accession, not the creator of the accession_action record itself.

Multilingual

GRIN-Global supports displaying data in multiple languages for system-level data. That is, if the system requires text to be displayed that is not actual GRIN-Global data, that text should be in the appropriate language for the current user. This is accomplished by using a table ending with “_lang” as a child table. GRIN-Global ships with the following language tables:

- code_value_lang
- crop_trait_code_lang
- sys_lang
- sys_dataview_field_lang
- sys_dataview_lang
- sys_file_lang
- sys_group_lang
- sys_permissions_lang
- sys_table_field_lang
- sys_database_migration_lang

Generating a List of the GRIN-Global Schema Tables & Fields

To download the entire GRIN-Global schema into a spreadsheet, directions for doing so are in the GRIN-Global Admin Tool Guide.

Tables & Field Definitions

The following pages are a copy of the online version of the GRIN-Global data dictionary. To view the current version of the google doc, please click this link.

Data Dictionary Column Headings

Table

The table in the GRIN-Global database.

Field Name

The actual field name in the GRIN-Global database.

GRIN Field Name

The equivalent field name as used in the GRIN database.

Notation

* GRIN-Global field, not in GRIN

** All auditable tables in GRIN-Global contain fields used explicitly for auditing purposes: Who created the record (created_by) and when (created_date); Who last modified the record (modified_by) and when (modified_date); Who currently owns the record (owned_by) and when they received ownership (owned_date)

Display Name (English Friendly Name)

The column names displayed by the dataviews

Data Types

Data Type	Description
datetime2	A datetime data type that can handle time in nanoseconds and has a year range extending from the year "0001" to "9999."
decimal	The decimal data type can store a maximum of 38 digits, all of which can be to the right of the decimal point. The decimal data type stores an exact representation of the number; there is no approximation of the stored value.
int	The integer data type is stored as a 4-byte integer; numeric values can range from -2^^{31} through 2^$^{31-1}$.
nvarchar	An nvarchar field can store a string of text characters (maximum 4,000). The “n” in nvarchar means u*N*icode. varchar is an abbreviation for variable-length character string. Essentially, nvarchar is variable text field that supports two-byte characters, therefore capable of handling non-English symbols.

Nullable

In database management, a field that is allowed to have no values is called nullable.

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
app_resource	app_resource_id	*	App Resource ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
app_resource	sys_lang_id	*	Language		int	NO
app_resource	app_name	*	App Name		nvarchar	NO
app_resource	form_name	*	Form Name		nvarchar	NO
app_resource	app_resource_name	*	App Resource Name		nvarchar	NO
app_resource	title_member	*	Title Member		nvarchar	YES
app_resource	display_member	*	Display Member		nvarchar	NO
app_resource	value_member	*	Value Member		nvarchar	YES
app_resource	sort_order	*	Sort Order		int	YES
app_resource	properties	*			nvarchar	YES
app_resource	created_date	**	Created Date		datetime2	NO
app_resource	created_by	**	Created By		int	NO
app_resource	modified_date	**	Modified Date		datetime2	YES
app_resource	modified_by	**	Modified By		int	YES
app_resource	owned_date	**	Owned Date		datetime2	NO
app_resource	owned_by	**	Owned By		int	NO
app_setting	app_setting_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
app_setting	category_tag	*			nvarchar	YES
app_setting	sort_order	*			int	YES
app_setting	name	*			nvarchar	NO
app_setting	value	*			nvarchar	YES
app_setting	created_date	**	Created Date		datetime2	NO
app_setting	created_by	**	Created By		int	NO
app_setting	modified_date	**	Modified Date		datetime2	YES
app_setting	modified_by	**	Modified By		int	YES
app_setting	owned_date	**	Owned Date		datetime2	NO
app_setting	owned_by	**	Owned By		int	NO
app_user_gui_setting	app_user_gui_setting_id	*	App User GUI Settings ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
app_user_gui_setting	cooperator_id	*	Cooperator		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
app_user_gui_setting	app_name	*	App Name		nvarchar	YES
app_user_gui_setting	form_name	*	Form Name		nvarchar	YES
app_user_gui_setting	resource_name	*	Resource Name		nvarchar	NO
app_user_gui_setting	resource_key	*	Resource Key		nvarchar	NO
app_user_gui_setting	resource_value	*	Resource Value		nvarchar	YES
app_user_gui_setting	created_date	**	Created Date		datetime2	NO
app_user_gui_setting	created_by	**	Created By		int	NO
app_user_gui_setting	modified_date	**	Modified Date		datetime2	YES
app_user_gui_setting	modified_by	**	Modified By		int	YES
app_user_gui_setting	owned_date	**	Owned Date		datetime2	NO
app_user_gui_setting	owned_by	**	Owned By		int	NO
app_user_item_list	app_user_item_list_id	*	App User Item List ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
app_user_item_list	cooperator_id	*	Cooperator		int	NO
app_user_item_list	tab_name	*	Tab Name		nvarchar	NO
app_user_item_list	list_name	*	List Name		nvarchar	NO
app_user_item_list	id_number	*	ID Number		int	YES
app_user_item_list	id_type	*	ID Type		nvarchar	NO
app_user_item_list	sort_order	*	Sort Order		int	YES
app_user_item_list	title	*	Title		nvarchar	NO
app_user_item_list	description	*	Description		nvarchar	YES
app_user_item_list	properties	*	Properties		nvarchar	YES
app_user_item_list	created_date	**	Created Date		datetime2	NO
app_user_item_list	created_by	**	Created By		int	NO
app_user_item_list	modified_date	**	Modified Date		datetime2	YES
app_user_item_list	modified_by	**	Modified By		int	YES
app_user_item_list	owned_date	**	Owned Date		datetime2	NO
app_user_item_list	owned_by	**	Owned By		int	NO
sys_database	sys_database_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_database	migration_number	*			int	NO
sys_database	created_date	**	Created Date		datetime2	NO
sys_database	created_by	**	Created By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_database	modified_date	**	Modified Date		datetime2	YES
sys_database	modified_by	**	Modified By		int	YES
sys_database	owned_date	**	Owned Date		datetime2	NO
sys_database	owned_by	**	Owned By		int	NO
sys_database_migration	sys_database_migration_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_database_migration	migration_number	*			int	NO
sys_database_migration	sort_order	*			int	NO
sys_database_migration	action_type	*			nvarchar	NO
sys_database_migration	action_up	*			nvarchar	YES
sys_database_migration	action_down	*			nvarchar	YES
sys_database_migration	created_date	**	Created Date		datetime2	NO
sys_database_migration	created_by	**	Created By		int	NO
sys_database_migration	modified_date	**	Modified Date		datetime2	YES
sys_database_migration	modified_by	**	Modified By		int	YES
sys_database_migration	owned_date	**	Owned Date		datetime2	NO
sys_database_migration	owned_by	**	Owned By		int	NO
sys_database_migration_lang	sys_database_migration_la	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_database_migration_lang	sys_database_migration_id	*		Foreign key to the sys_database_migration table.	int	NO
sys_database_migration_lang	language_iso_639_3_code	*			nvarchar	NO
sys_database_migration_lang	title	*			nvarchar	NO
sys_database_migration_lang	description	*			nvarchar	YES
sys_database_migration_lang	created_date	**	Created Date		datetime2	NO
sys_database_migration_lang	created_by	**	Created By		int	NO
sys_database_migration_lang	modified_date	**	Modified Date		datetime2	YES
sys_database_migration_lang	modified_by	**	Modified By		int	YES
sys_database_migration_lang	owned_date	**	Owned Date		datetime2	NO
sys_database_migration_lang	owned_by	**	Owned By		int	NO
sys_datatrigger	sys_datatrigger_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_datatrigger	sys_dataview_id	*		Foreign key to sys_dataview table	int	YES

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_datatrigger	sys_table_id	*		Foreign key to sys_table table	int	YES
sys_datatrigger	virtual_file_path	*		Web-based, relative URL to the assembly file path. Should always point to a location under ~/uploads/datatriggers. Example: ~/uploads/datatriggers/exampletrigger.dll	nvarchar	YES
sys_datatrigger	assembly_name	*		File name of the assembly, excluding path but including extension. Example: exampletrigger.dll	nvarchar	NO
sys_datatrigger	fully_qualified_class_name	*		Fully qualified .NET name of the class to be instantiated. Example: GrinGlobal. ExampleTrigger.SaveTrigger	nvarchar	NO
sys_datatrigger	is_enabled	*		'Y' if this data trigger is enabled, 'N' otherwise	nvarchar	NO
sys_datatrigger	is_system	*		'Y' if this data trigger is considered to be necessary for system to function properly, 'N' otherwise.	nvarchar	NO
sys_datatrigger	sort_order	*		Currently not used. Intended for future development of ordering of trigger classes	int	NO
sys_datatrigger	created_date	**	Created Date		datetime2	NO
sys_datatrigger	created_by	**	Created By		int	NO
sys_datatrigger	modified_date	**	Modified Date		datetime2	YES
sys_datatrigger	modified_by	**	Modified By		int	YES
sys_datatrigger	owned_date	**	Owned Date		datetime2	NO
sys_datatrigger	owned_by	**	Owned By		int	NO
sys_datatrigger_lang	sys_datatrigger_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)		
sys_datatrigger_lang	sys_datatrigger_id	*		Foreign key to the sys_datatrigger table.		
sys_datatrigger_lang	sys_lang_id	*		Foreign key to the sys_datalang table.		
sys_datatrigger_lang	title	*				
sys_datatrigger_lang	description	*				
sys_datatrigger_lang	created_date	**	Created Date			
sys_datatrigger_lang	created_by	**	Created By			
sys_datatrigger_lang	modified_date	**	Modified Date			
sys_datatrigger_lang	modified_by	**	Modified By			
sys_datatrigger_lang	owned_date	**	Owned Date			
sys_datatrigger_lang	owned_by	**	Owned By			

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_dataview	sys_dataview_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview	dataview_name	*	Dataview Name	Programmatic name of the dataview. Should never contain whitespace. Must be unique.	nvarchar	NO
sys_dataview	is_enabled	*		'Y' if this dataview is enabled, 'N' otherwise	nvarchar	NO
sys_dataview	is_readonly	*		'Y' if this dataview is read only, 'N' otherwise. Overrides is_readonly values at the dataview field level.	nvarchar	NO
sys_dataview	category_name	*		Currently not used. Will be used to categorize dataviews. To be implemented in the Curator Tool to view dataviews on a per-category basis, instead of showing all in a single large list.	nvarchar	YES
sys_dataview	database_area	*		Implemented in the Curator Tool to view dataviews on a per-category basis, instead of showing all in a single large list.	nvarchar	YES
sys_dataview	database_area_sort_order	*		Determines order for displaying dataviews within a category.	int	YES
sys_dataview	is_transform	*		'Y' if the dataview is to be transformed (also known as transposed, tilted, pivoted, etc) before being output to the client. 'N' otherwise.	nvarchar	NO
sys_dataview	transform_field_for_names	*		Name of field to transform the dataview by. Ignored if is_transform != 'Y'	nvarchar	YES
sys_dataview	transform_field_for_caption	*		Name of the field the transform should use for column captions. Ignored if is_transform != 'Y'	nvarchar	YES
sys_dataview	transform_field_for_values	*		Name of the field the transform should use for values. Ignored if is_transform != 'Y'	nvarchar	YES
sys_dataview	configuration_options	*			nvarchar	YES
sys_dataview	created_date	**	Created Date		datetime2	NO
sys_dataview	created_by	**	Created By		int	NO
sys_dataview	modified_date	**	Modified Date		datetime2	YES
sys_dataview	modified_by	**	Modified By		int	YES
sys_dataview	owned_date	**	Owned Date		datetime2	NO
sys_dataview	owned_by	**	Owned By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_dataview_field	sys_dataview_field_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview_field	sys_dataview_id	*		Foreign key to sys_dataview table.	int	NO
sys_dataview_field	field_name	*	Field Name	SQL-friendly name of the dataview field. Must be unique within a dataview.	nvarchar	NO
sys_dataview_field	sys_table_field_id	*		Foreign key to sys_table_field table. Determines which table/field this dataview field represents. If null, is_readonly should also be set to 'Y' because the table/field this dataview field represents is unknown.	int	YES
sys_dataview_field	is_readonly	*		'Y' if this dataview field is read only, 'N' otherwise.	nvarchar	NO
sys_dataview_field	is_primary_key	*		'Y' if this dataview field is considered the primary key for the dataview. 'N' otherwise.	nvarchar	NO
sys_dataview_field	is_transform	*		'Y' if this dataview field is part of the transform (if any). 'N' otherwise.	nvarchar	NO
sys_dataview_field	sort_order	*		Determines the order of the dataview fields within a dataview. Starts at 0.	int	NO
sys_dataview_field	gui_hint	*		Determines which control should be displayed in a GUI client, such as the Curator Tool. Possible values are NULL, "TOGGLE_CONTROL", "SMALL_SINGLE_SELECT_CONTROL", "LARGE_SINGLE_SELECT_CONTROL", "INTEGER_CONTROL", "TEXT_CONTROL", "DATE_CONTROL"	nvarchar	YES
sys_dataview_field	foreign_key_dataview_nam	*		If gui_hint = "LARGE_SINGLE_SELECT_CONTROL", this field determines which dataview the GUI should use to display the list of possible selections	nvarchar	YES
sys_dataview_field	group_name	*		If gui_hint = "SMALL_SINGLE_SELECT_CONTROL", this field determines which set of code_value records (which have the same group_name) to display as the list of possible selections.	nvarchar	YES
sys_dataview_field	created_date	**	Created Date		datetime2	NO
sys_dataview_field	created_by	**	Created By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_dataview_field	modified_date	**	Modified Date		datetime2	YES
sys_dataview_field	modified_by	**	Modified By		int	YES
sys_dataview_field	owned_date	**	Owned Date		datetime2	NO
sys_dataview_field	owned_by	**	Owned By		int	NO
sys_dataview_field_lang	sys_dataview_field_lang_id	*	System Dataview Field Language ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview_field_lang	sys_dataview_field_id	*	System Dataview Field ID	Foreign key to sys_dataview_field table	int	NO
sys_dataview_field_lang	sys_lang_id	*	Language	Foreign key to sys_lang table	int	NO
sys_dataview_field_lang	title	*	Field Title	Language-specific title to display for the associated dataview field	nvarchar	NO
sys_dataview_field_lang	description	*	Field Description	Language-specific description to display for the associated dataview field	nvarchar	YES
sys_dataview_field_lang	created_date	*	Created Date		datetime2	NO
sys_dataview_field_lang	created_by	*	Created By		int	NO
sys_dataview_field_lang	modified_date	*	Modified Date		datetime2	YES
sys_dataview_field_lang	modified_by	*	Modified By		int	YES
sys_dataview_field_lang	owned_date	*	Owned Date		datetime2	NO
sys_dataview_field_lang	owned_by	*	Owned By		int	NO
sys_dataview_lang	sys_dataview_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview_lang	sys_dataview_id	*		Foreign key to sys_dataview table	int	NO
sys_dataview_lang	sys_lang_id	*		Foreign key to sys_lang table	int	NO
sys_dataview_lang	title	*	Dataview Title	Language-specific title to display for the associated dataview	nvarchar	NO
sys_dataview_lang	description	*	Dataview Description	Language-specific description to display for the associated dataview	nvarchar	YES
sys_dataview_lang	created_date	*	Created Date		datetime2	NO
sys_dataview_lang	created_by	*	Created By		int	NO
sys_dataview_lang	modified_date	*	Modified Date		datetime2	YES
sys_dataview_lang	modified_by	*	Modified By		int	YES
sys_dataview_lang	owned_date	**	Owned Date		datetime2	NO
sys_dataview_lang	owned_by	**	Owned By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_dataview_param	sys_dataview_param_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview_param	sys_dataview_id	*		Foreign key to sys_dataview table	int	NO
sys_dataview_param	param_name	*	Parameter Name	Name of SQL parameter. Must start with ":", "?", or "@" to work properly. Must be unique within a dataview	nvarchar	NO
sys_dataview_param	param_type	*	Parameter Type	Type of SQL parameter. Allowed values are "DATETIME", "INTEGER", "INTEGERCOLLECTION", "STRING"	nvarchar	YES
sys_dataview_param	sort_order	*	Sort Order	Order in which the parameters should appear. Necessary for some database engines which rely on position of the parameters instead of names.	int	YES
sys_dataview_param	created_date	**	Created Date		datetime2	NO
sys_dataview_param	created_by	**	Created By		int	NO
sys_dataview_param	modified_date	**	Modified Date		datetime2	YES
sys_dataview_param	modified_by	**	Modified By		int	YES
sys_dataview_param	owned_date	**	Owned Date		datetime2	NO
sys_dataview_param	owned_by	**	Owned By		int	NO
sys_dataview_sql	sys_dataview_sql_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_dataview_sql	sys_dataview_id	*		Foreign key to sys_dataview table	int	NO
sys_dataview_sql	database_engine_tag	*		Represents which database engine this SQL statement should be used for. Possible values are "mysql", "oracle", "postgresql", and "sqlserver"	nvarchar	NO
sys_dataview_sql	sql_statement	*		The database-engine-specific SQL statement for the dataview	nvarchar	NO
sys_dataview_sql	created_date	**	Created Date		datetime2	NO
sys_dataview_sql	created_by	**	Created By		int	NO
sys_dataview_sql	modified_date	**	Modified Date		datetime2	YES
sys_dataview_sql	modified_by	**	Modified By		int	YES
sys_dataview_sql	owned_date	**	Owned Date		datetime2	NO
sys_dataview_sql	owned_by	**	Owned By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_file	sys_file_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_file	is_enabled	*		'Y' if file is downloadable. 'N' otherwise.	nvarchar	NO
sys_file	virtual_file_path	*		Web-based, relative url to the file path. Should always point to a location under ~/uploads. Example: ~/uploads/installers/exampledownloadfile.exe	nvarchar	NO
sys_file	file_name	*		Name of the file, excluding path but including extension	nvarchar	YES
sys_file	file_version	*		Version as reported by the file itself. For MSI files, this is the ProductVersion property. For other files, the File Version. If no file version is available, the creation date of the file is used.	nvarchar	YES
sys_file	file_size	*		File length in bytes. (format is 18 integers and 0 decimals).	decimal	YES
sys_file	display_name	*		Human-friendly name of the file. For MSI files, this must be the exact name of the application when it is installed	nvarchar	YES
sys_file	created_date	**	Created Date		datetime2	NO
sys_file	created_by	**	Created By		int	NO
sys_file	modified_date	**	Modified Date		datetime2	YES
sys_file	modified_by	**	Modified By		int	YES
sys_file	owned_date	**	Owned Date		datetime2	NO
sys_file	owned_by	**	Owned By		int	NO
sys_file_group	sys_file_group_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_file_group	group_name	*		Name of the group. Must be unique.	nvarchar	NO
sys_file_group	version_name	*		An overall version for the group. This is a manual setting, not auto-derived from any file information	nvarchar	NO
sys_file_group	is_enabled	*		'Y' if the files in the group are downloadable, 'N' otherwise	nvarchar	NO
sys_file_group	created_date	**	Created Date		datetime2	NO
sys_file_group	created_by	**	Created By		int	NO
sys_file_group	modified_date	**	Modified Date		datetime2	YES

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_file_group	modified_by	**	Modified By		int	YES
sys_file_group	owned_date	**	Owned Date		datetime2	NO
sys_file_group	owned_by	**	Owned By		int	NO
sys_file_group_map	sys_file_group_map_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_file_group_map	sys_file_group_id	*		Foreign key to sys_file_group table	int	NO
sys_file_group_map	sys_file_id	*		Foreign key to sys_file table	int	NO
sys_file_group_map	created_date	**	Created Date		datetime2	NO
sys_file_group_map	created_by	**	Created By		int	NO
sys_file_group_map	modified_date	**	Modified Date		datetime2	YES
sys_file_group_map	modified_by	**	Modified By		int	YES
sys_file_group_map	owned_date	**	Owned Date		datetime2	NO
sys_file_group_map	owned_by	**	Owned By		int	NO
sys_file_lang	sys_file_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_file_lang	sys_file_id	*		Foreign key to the sys_file table	int	NO
sys_file_lang	sys_lang_id	*		Foreign key to the sys_lang table	int	NO
sys_file_lang	title	*		Language-specific title to display for the associated file	nvarchar	NO
sys_file_lang	description	*		Language-specific description to display for the associated file	nvarchar	YES
sys_file_lang	created_date	**	Created Date		datetime2	NO
sys_file_lang	created_by	**	Created By		int	NO
sys_file_lang	modified_date	**	Modified Date		datetime2	YES
sys_file_lang	modified_by	**	Modified By		int	YES
sys_file_lang	owned_date	**	Owned Date		datetime2	NO
sys_file_lang	owned_by	**	Owned By		int	NO
sys_group	sys_group_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_group	group_tag	*		Programmatic code used to denote the group to the GRIN-Global system. Must be unique. Example is the group record with group_code = “ADMINS”.	nvarchar	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_group	is_enabled	*		'Y' if the group is enabled (i.e. will be used during security calculations). 'N' otherwise.	nvarchar	NO
sys_group	created_date	**	Created Date		datetime2	NO
sys_group	created_by	**	Created By		int	NO
sys_group	modified_date	**	Modified Date		datetime2	YES
sys_group	modified_by	**	Modified By		int	YES
sys_group	owned_date	**	Owned Date		datetime2	NO
sys_group	owned_by	**	Owned By		int	NO
sys_group_lang	sys_group_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_group_lang	sys_group_id	*		Foreign key to the sysec_group table	int	NO
sys_group_lang	sys_lang_id	*		Foreign key to the sys_lang table	int	NO
sys_group_lang	title	*		Language-specific title to display for the associated file	nvarchar	NO
sys_group_lang	description	*		Language-specific description to display for the associated file	nvarchar	YES
sys_group_lang	created_date	**	Created Date		datetime2	NO
sys_group_lang	created_by	**	Created By		int	NO
sys_group_lang	modified_date	**	Modified Date		datetime2	YES
sys_group_lang	modified_by	**	Modified By		int	YES
sys_group_lang	owned_date	**	Owned Date		datetime2	NO
sys_group_lang	owned_by	**	Owned By		int	NO
sys_group_permission_map	sys_group_permission_ma	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_group_permission_map	sys_group_id	*		Foreign key to the sys_group table	int	NO
sys_group_permission_map	sys_permission_id	*		Foreign key to the sys_permission table	int	NO
sys_group_permission_map	created_date	**	Created Date		datetime2	NO
sys_group_permission_map	created_by	**	Created By		int	NO
sys_group_permission_map	modified_date	**	Modified Date		datetime2	YES
sys_group_permission_map	modified_by	**	Modified By		int	YES
sys_group_permission_map	owned_date	**	Owned Date		datetime2	NO
sys_group_permission_map	owned_by	**	Owned By		int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_group_user_map	sys_group_user_map_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_group_user_map	sys_group_id	*		Foreign key to the sys_group table	int	NO
sys_group_user_map	sys_user_id	*		Foreign key to the sys_user table	int	NO
sys_group_user_map	created_date	**	Created Date		datetime2	NO
sys_group_user_map	created_by	**	Created By		int	NO
sys_group_user_map	modified_date	**	Modified Date		datetime2	YES
sys_group_user_map	modified_by	**	Modified By		int	YES
sys_group_user_map	owned_date	**	Owned Date		datetime2	NO
sys_group_user_map	owned_by	**	Owned By		int	NO
sys_index	sys_index_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_index	sys_table_id	*		Foreign key to the sys_table table	int	NO
sys_index	index_name	*		Name of the index. Calculated by inspecting the actual database schema.	nvarchar	NO
sys_index	is_unique	*		'Y' if this index contains a unique constraint. 'N' otherwise. Calculated by inspecting the actual database schema.	nvarchar	NO
sys_index	created_date	**	Created Date		datetime2	NO
sys_index	created_by	**	Created By		int	NO
sys_index	modified_date	**	Modified Date		datetime2	YES
sys_index	modified_by	**	Modified By		int	YES
sys_index	owned_date	**	Owned Date		datetime2	NO
sys_index	owned_by	**	Owned By		int	NO
sys_index_field	sys_index_field_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_index_field	sys_index_id	*		Foreign key to the sys_index table	int	NO
sys_index_field	sys_table_field_id	*		Foreign key to the sys_table_field table. Calculated by inspecting the database schema itself and performing a lookup based on the table and field name.	int	NO
sys_index_field	sort_order	*		Database order of the fields. Calculated by inspecting the database schema itself.	int	NO
sys_index_field	created_date	**	Created Date		datetime2	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_index_field	created_by	**	Created By		int	NO
sys_index_field	modified_date	**	Modified Date		datetime2	YES
sys_index_field	modified_by	**	Modified By		int	YES
sys_index_field	owned_date	**	Owned Date		datetime2	NO
sys_index_field	owned_by	**	Owned By		int	NO
sys_lang	sys_lang_id	*	Value Member	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_lang	iso_639_3_tag	*	ISO 639 3 Tag	The ISO 639-3 representation for the language. e.g. “ENG” See http://en.wikipedia.org/wiki/ISO_639-3	nvarchar	NO
sys_lang	ietf_tag	*	IEFT Tag	The IETF language tag for the language. e.g. “en-US” See http://en.wikipedia.org/wiki/IETF_language_tag	nvarchar	YES
sys_lang	script_direction	*	Script Direction	Direction in which the language is displayed. “RTL” means “right to left.” All other values are interpreted as “left to right.”	nvarchar	YES
sys_lang	title	*	Display Member	A human-friendly title for the language, e.g. “English”	nvarchar	NO
sys_lang	description	*	Description	A human-friendly description for the language, e.g. “United States English”	nvarchar	YES
sys_lang	created_date	*	Created Date		datetime2	NO
sys_lang	created_by	*	Created By		int	NO
sys_lang	modified_date	*	Modified Date		datetime2	YES
sys_lang	modified_by	*	Modified By		int	YES
sys_lang	owned_date	**	Owned Date		datetime2	NO
sys_lang	owned_by	**	Owned By		int	NO
sys_permission[1]	sys_permission_id	*	System Permission ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_permission	sys_dataview_id	*	System Dataview ID	Foreign key to sys_dataview	int	YES
sys_permission	sys_table_id	*	System Table ID	Foreign key to sys_table.	int	YES
sys_permission	permission_tag	*	NULL	A unique, machine friendly tag for the permission.	nvarchar	YES
sys_permission	is_enabled	*	Is Enabled?	‘Y’ if this permission should be used for security calculations, ’N’ otherwise. Useful for toggling during testing, troubleshooting, and configuring security issues.	nvarchar	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_permission	create_permission	*	Create Permission	The access level this permission grants for creating records. Possible values are “A” (Allowed), “D” (Denied), and “I” (Inherited)	nvarchar	NO
sys_permission	read_permission	*	Read Permission	The access level this permission grants for reading records. Possible values are “A” (Allowed), “D” (Denied), and “I” (Inherited)	nvarchar	NO
sys_permission	update_permission	*	Update Permission	The access level this permission grants for updating records. Possible values are “A” (Allowed), “D” (Denied), and “I” (Inherited)	nvarchar	NO
sys_permission	delete_permission	*	Delete Permission	The access level this permission grants for deleting records. Possible values are “A” (Allowed), “D” (Denied), and “I” (Inherited)	nvarchar	NO
sys_permission	created_date	**	Created Date		datetime2	NO
sys_permission	created_by	**	Created By		int	NO
sys_permission	modified_date	**	Modified Date		datetime2	YES
sys_permission	modified_by	**	Modified By		int	YES
sys_permission	owned_date	**	Owned Date		datetime2	NO
sys_permission	owned_by	**	Owned By		int	NO
sys_permission_field	sys_permission_field_id	*	System Permission Field ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_permission_field	sys_permission_id	*	System Permission ID	Foreign key to the sys_permission table	int	NO
sys_permission_field	sys_dataview_field_id	*	System Dataview Field ID	Foreign key to the sys_dataview_field table. Typically one of sys_dataview_field_id and sys_table_field_id are specified, not both.	int	YES
sys_permission_field	sys_table_field_id	*	System Table Field ID	Foreign key to the sys_table_field table. Typically one of sys_dataview_field_id and sys_table_field_id are specified, not both.	int	YES
sys_permission_field	field_type	*	Field Type	Data type of the field. Valid values are “INTEGER”, “STRING”, “DATETIME”, “DECIMAL”, and “DOUBLE”	nvarchar	YES
sys_permission_field	compare_operator	*	Compare Operator	Operator used for comparison. Valid values are “=”, “<>”, “<=”, “>=”, “in”, “>”, “<”, “like”, “not like”	nvarchar	YES
sys_permission_field	compare_value	*	Compare Value	The value the field is compared against.	nvarchar	YES
sys_permission_field	parent_table_field_id	*	Parent Table Field ID	Foreign key to the sys_table_field table for the parent.	int	YES

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_permission_field	parent_field_type	*	Parent Field Type	Data type of the field in the parent table. Valid values are “INTEGER”, “STRING”, “DATETIME”, “DECIMAL”, and “DOUBLE”	nvarchar	YES
sys_permission_field	parent_compare_operator	*	Parent Compare Operator	Operator used for comparison in the parent table. Valid values are “=”, “<>”, “<=”, “>=”, “in”, “>”, “<”, “like”, “not like”	nvarchar	YES
sys_permission_field	parent_compare_value	*	Parent Compare Value	The value the parent field is compared against.	nvarchar	YES
sys_permission_field	compare_mode	*	Compare Mode	“current” to compare against a field in the current table; “parent” to compare against a field in the parent table (as defined by parent_table_field_id	nvarchar	YES
sys_permission_field	created_date	**	Created Date		datetime2	NO
sys_permission_field	created_by	**	Created By		int	NO
sys_permission_field	modified_date	**	Modified Date		datetime2	YES
sys_permission_field	modified_by	**	Modified By		int	YES
sys_permission_field	owned_date	**	Owned Date		datetime2	NO
sys_permission_field	owned_by	**	Owned By		int	NO
sys_permission_lang	sys_permission_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_permission_lang	sys_permission_id	*		Foreign key to the sys_perm table	int	NO
sys_permission_lang	sys_lang_id	*		Foreign key to the sys_lang table	int	NO
sys_permission_lang	title	*	Title	Language-specific title to display for the associated permission	nvarchar	NO
sys_permission_lang	description	*	Description	Language-specific description to display for the associated permission	nvarchar	YES
sys_permission_lang	created_date	**	Created Date		datetime2	NO
sys_permission_lang	created_by	**	Created By		int	NO
sys_permission_lang	modified_date	**	Modified Date		datetime2	YES
sys_permission_lang	modified_by	**	Modified By		int	YES
sys_permission_lang	owned_date	**	Owned Date		datetime2	NO
sys_permission_lang	owned_by	**	Owned By		int	NO
sys_table	sys_table_id	*	Value Member	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_table	table_name	*	Display Member	Name of the table in the schema	nvarchar	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_table	is_enabled	*	Is Enabled?	'Y' if the table this record represents is available for use by dataviews. 'N' otherwise	nvarchar	NO
sys_table	is_readonly	*	Is Read Only?	'Y' if the table this record represents should always be read only when displayed by a dataview. 'N' otherwise.	nvarchar	NO
sys_table	audits_created	*	Audits Created	'Y' if the table this record represents audits creation information. 'N' otherwise.	nvarchar	NO
sys_table	audits_modified	*	Audits Modified	'Y' if the table this record represents audits modification information. 'N' otherwise.	nvarchar	NO
sys_table	audits_owned	*	Audits Owned	'Y' if the table this record represents audits ownership information. 'N' otherwise.	nvarchar	NO
sys_table	database_area	*	Database Area	A logical grouping of tables in the database. This value is not set automatically during inspection. Used by the Search Tool to display a set of checkboxes on the right hand side of which indexes to search	nvarchar	YES
sys_table	created_date	**	Created Date		datetime2	NO
sys_table	created_by	**	Created By		int	NO
sys_table	modified_date	**	Modified Date		datetime2	YES
sys_table	modified_by	**	Modified By		int	YES
sys_table	owned_date	**	Owned Date		datetime2	NO
sys_table	owned_by	**	Owned By		int	NO
sys_table_field	sys_table_field_id	*	Child Table Field	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_table_field	sys_table_id	*	Child Table ID	Foreign key to sys_table table	int	NO
sys_table_field	field_name	*	Child Field Name	Name of the field in the schema	nvarchar	NO
sys_table_field	field_ordinal	*		Ordinal of the field in the table declaration in the schema	int	YES
sys_table_field	field_purpose	*	Child Field Purpose	The purpose for the existence of the field in the table. Must be one of the following values: "PRIMARY_KEY", "DATA", "AUTO_ASSIGN_CREATE", "AUTO_DATE_CREATE", "AUTO_ASSIGN_MODIFY", "AUTO_DATE_MODIFY", "AUTO_ASSIGN_OWN", "AUTO_DATE_OWN"	nvarchar	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_table_field	field_type	*	Field Type	The type of data stored in the field. Must be one of the following values: “STRING”, “INTEGER”, “DECIMAL”, “DATETIME”	nvarchar	NO
sys_table_field	default_value	*	Default Value	The default value to auto-insert for this field when creating a new record. Can be any value valid for the given field_type. A special moniker of “{DBNull.Value}” can be used to inform GRIN-Global to insert a database NULL value	nvarchar	YES
sys_table_field	is_primary_key	*	Is Primary Key?	‘Y’ if the field is the primary key of the sys_table_id record it is related to, ‘N’ otherwise	nvarchar	NO
sys_table_field	is_foreign_key	*	Is Foreign Key?	‘Y’ if the field is a foreign key in the sys_table_id record it is related to, ‘N’ otherwise	nvarchar	NO
sys_table_field	foreign_key_table_field_id	*	Foreign Key Table Field ID	A self-referential foreign key that denotes the table and field to which this field refers	int	YES
sys_table_field	foreign_key_dataview_nam	*	Foreign Key Dataview Name	The default dataview used to perform lookups for this field. The value typically ends with “_lookup”.	nvarchar	YES
sys_table_field	is_nullable	*	Is Nullable?	‘Y’ if the field will accept database NULL values, ‘N’ otherwise. In the Admin Tool, the user interface equivalent is “Is Required”, which is a logical inverse of this value.	nvarchar	NO
sys_table_field	gui_hint	*	GUI Hint	Determines the default control which should be displayed in a GUI client, such as the Curator Tool. Possible values are NULL, “TOGGLE_CONTROL”, “SMALL_SINGLE_SELECT_CONTROL”, “LARGE_SINGLE_SELECT_CONTROL”, “INTEGER_CONTROL”, “TEXT_CONTROL”, “DATE_CONTROL”	nvarchar	NO
sys_table_field	is_readonly	*	Is Read Only?	‘Y’ if this field should be read-only via all dataviews. ‘N’ otherwise. Examples of read-only fields are primary key fields and audit fields	nvarchar	NO
sys_table_field	min_length	*	Minimum Length	The minimum number of characters that can be entered for a field that accepts text. Typically 0. Ignored for other field types.	int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_table_field	max_length	*	Maximum Length	The maximum number of characters that can be entered for a field that accepts text. A value of -1 means unlimited (which is actually a database-engine dependent limit, but typically about 2 GB). Ignored for other field types.	int	NO
sys_table_field	numeric_precision	*	Numeric Precision	The total number of digits to both the right and left of the decimal for the field. Applicable primarily to “DECIMAL” typed fields, but will sometimes be filled in for “INTEGER” typed fields as well. “INTEGER” typed fields always have a numeric_scale of 0.	int	NO
sys_table_field	numeric_scale	*	Numeric Scale	The number of digits to the right of the decimal for the field. Will always be zero except for “DECIMAL” typed fields, which will have a value between 0 and the value of numeric_precision, inclusive. Typical value is 5.	int	NO
sys_table_field	is_autoincrement	*	Is Auto Increment?	‘Y’ if the field auto-generates its own numeric value. Only applicable to primary key fields, and then only for those that are integer-typed.	nvarchar	NO
sys_table_field	group_name	*	Group Name	The code_value.group_name which represents the list of all possible values that are valid for this field. Used as the default group_name when creating dataviews.	nvarchar	YES
sys_table_field	created_date	**	Created Date		datetime2	NO
sys_table_field	created_by	**	Created By		int	NO
sys_table_field	modified_date	**	Modified Date		datetime2	YES
sys_table_field	modified_by	**	Modified By		int	YES
sys_table_field	owned_date	**	Owned Date		datetime2	NO
sys_table_field	owned_by	**	Owned By		int	NO
sys_table_field_lang	sys_table_field_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_table_field_lang	sys_table_field_id	*		Foreign key to the sys_table_field table	int	NO
sys_table_field_lang	sys_lang_id	*		Foreign key to the sys_lang table	int	NO

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_table_field_lang	title	*	Field Title	Language-specific title to display for the associated field	nvarchar	NO
sys_table_field_lang	description	*	Field Description	Language-specific description to display for the associated field	nvarchar	YES
sys_table_field_lang	created_date	**	Created Date		datetime2	NO
sys_table_field_lang	created_by	**	Created By		int	NO
sys_table_field_lang	modified_date	**	Modified Date		datetime2	YES
sys_table_field_lang	modified_by	**	Modified By		int	YES
sys_table_field_lang	owned_date	**	Owned Date		datetime2	NO
sys_table_field_lang	owned_by	**	Owned By		int	NO
sys_table_lang	sys_table_lang_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_table_lang	sys_table_id	*		Foreign key to the sys_table_field table	int	NO
sys_table_lang	sys_lang_id	*			int	NO
sys_table_lang	title	*			nvarchar	NO
sys_table_lang	description	*			nvarchar	YES
sys_table_lang	created_date	**	Created Date		datetime2	NO
sys_table_lang	created_by	**	Created By		int	NO
sys_table_lang	modified_date	**	Modified Date		datetime2	YES
sys_table_lang	modified_by	**	Modified By		int	YES
sys_table_lang	owned_date	**	Owned Date		datetime2	NO
sys_table_lang	owned_by	**	Owned By		int	NO
sys_table_relationship	sys_table_relationship_id	*		Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_table_relationship	sys_table_field_id	*		Foreign key to the sys_table_field table	int	YES
sys_table_relationship	relationship_type_tag	*	Relationship Type	Describes the type of relationship the record represents. Current possible values recognized by the Middle Tier code are “OWNER_PARENT”, “PARENT”, or “SELF”.	nvarchar	NO
sys_table_relationship	other_table_field_id	*	Parent Table Field ID	Another foreign key to the sec_table_field table, always pointing to a different sec_table_field record than the one above. May point to a sec_table_field record that is in the same sec_table though, in the case of a self-referential relationship.	int	YES

Table	Field Name	GRIN Field Name	Display Name (English Friendly Name)	Definition / Usage / Examples	Data Type	Nullable
sys_table_relationship	created_date	**	Created Date		datetime2	NO
sys_table_relationship	created_by	**	Created By		int	NO
sys_table_relationship	modified_date	**	Modified Date		datetime2	YES
sys_table_relationship	modified_by	**	Modified By		int	YES
sys_table_relationship	owned_date	**	Owned Date		datetime2	NO
sys_table_relationship	owned_by	**	Owned By		int	NO
sys_user	sys_user_id	*	System Table ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_user	user_name	*	Username	Login name for the user	nvarchar	NO
sys_user	password	*	Password	Password for the user. Encrypted using the GrinGlobal.Core.Crypto class.	nvarchar	NO
sys_user	is_enabled	*	Is Enabled?	'Y' if the user is allowed to login to the system, 'N' otherwise.	nvarchar	NO
sys_user	cooperator_id	*	Cooperator	Foreign key to cooperator table, where all contact information for this user is stored. Required.	int	YES
sys_user	created_date	**	Created Date		datetime2	NO
sys_user	created_by	**	Created By		int	NO
sys_user	modified_date	**	Modified Date		datetime2	YES
sys_user	modified_by	**	Modified By		int	YES
sys_user	owned_date	**	Owned Date		datetime2	NO
sys_user	owned_by	**	Owned By		int	NO
sys_user_permission_map	sys_user_permission_map	*	System User Permission Map ID	Table's primary key (PK) field. (Auto-generated by GRIN-Global, cannot be edited.)	int	NO
sys_user_permission_map	sys_user_id	*	System Table ID	Foreign key to the sys_user table	int	NO
sys_user_permission_map	sys_permission_id	*	System Permission ID	Foreign key to the sys_permission table	int	NO
sys_user_permission_map	is_enabled	*	Is Enabled?	'Y' if this permission should be used in the security calculation for this user. 'N' otherwise	nvarchar	NO
sys_user_permission_map	created_date	**	Created Date		datetime2	NO
sys_user_permission_map	created_by	**	Created By		int	NO
sys_user_permission_map	modified_date	**	Modified Date		datetime2	YES
sys_user_permission_map	modified_by	**	Modified By		int	YES
sys_user_permission_map	owned_date	**	Owned Date		datetime2	NO
sys_user_permission_map	owned_by	**	Owned By		int	NO

Comments	
*	GRIN-Global field, not in GRIN
**	All auditable tables in GRIN-Global contain fields used explicitly for auditing purposes: Who created the record (created_by) and when (created_date); Who last modified the record (modified_by) and when (modified_date); Who currently owns the record (owned_by) and when they received ownership (owned_date)