

# Chart of Accounts (COA)

## Technical Document

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## Purpose

Chart of Accounts (COA) is a set of tables that help OLE to function. COA tables were largely inherited from Kualu Financial System (KFS) and defines the attributes and values used by the system to validate transactions. It also helps in reporting leveraging the complex relationship between the various COA tables. Institutions can utilize the COA to customize their individual financial structures as suited.

This document will provide an overview about COA in OLE, the associated tables, classes and configurations.

## Dependencies (db tables)

Significant tables part of COA

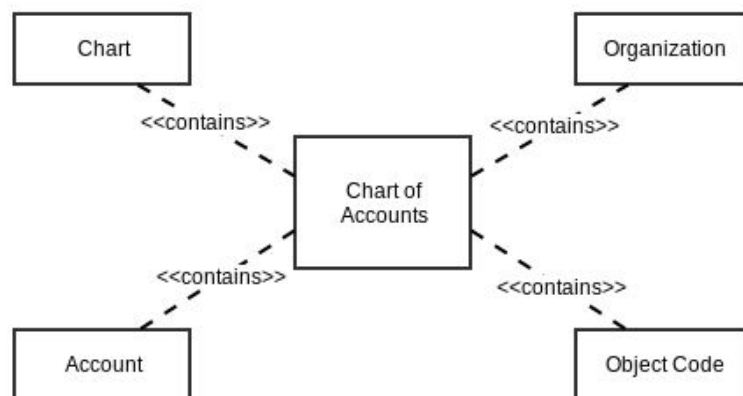
ca_account_t	Account
ca_chart_t	Chart
ca_obj_consoldtn_t	Object Consolidation
ca_obj_level_t	Object Level
ca_obj_sub_type_t	Object Sub Type
ca_object_code_t	Object Code
ca_org_t	Organization
ca_sub_acct_t	Sub Account
ca_sub_object_cd_t	Sub Object Code

Significant tables where COA is used/referenced

ap_crdt_memo_acct_t	Accounts Payable Credit Memo Account
ap_pmt_rqst_acct_t	Accounts Payable Requisition Account
fp_acct_lines_t	Financial Processing Accounting Lines
fp_bank_t	Financial Processing Bank
fp_bdgt_adj_dtl_t	Financial Processing Budget Adjustment Detail
fs_option_t	Fiscal Year

gl_acct_balances_t	General Ledger Account Balances
gl_balance_t	General Ledger Balance
gl_encumbrance_t	General Ledger Encumbrance
gl_entry_t	General Ledger Entry
gl_pending_entry_t	General Ledger Pending Entry
pur_po_t	Purchase Order
pur_vndr_cust_nbr_t	Vendor Customer Number

## Logical Data Model (Class Structure)



There are four basic elements to the Chart of Accounts:

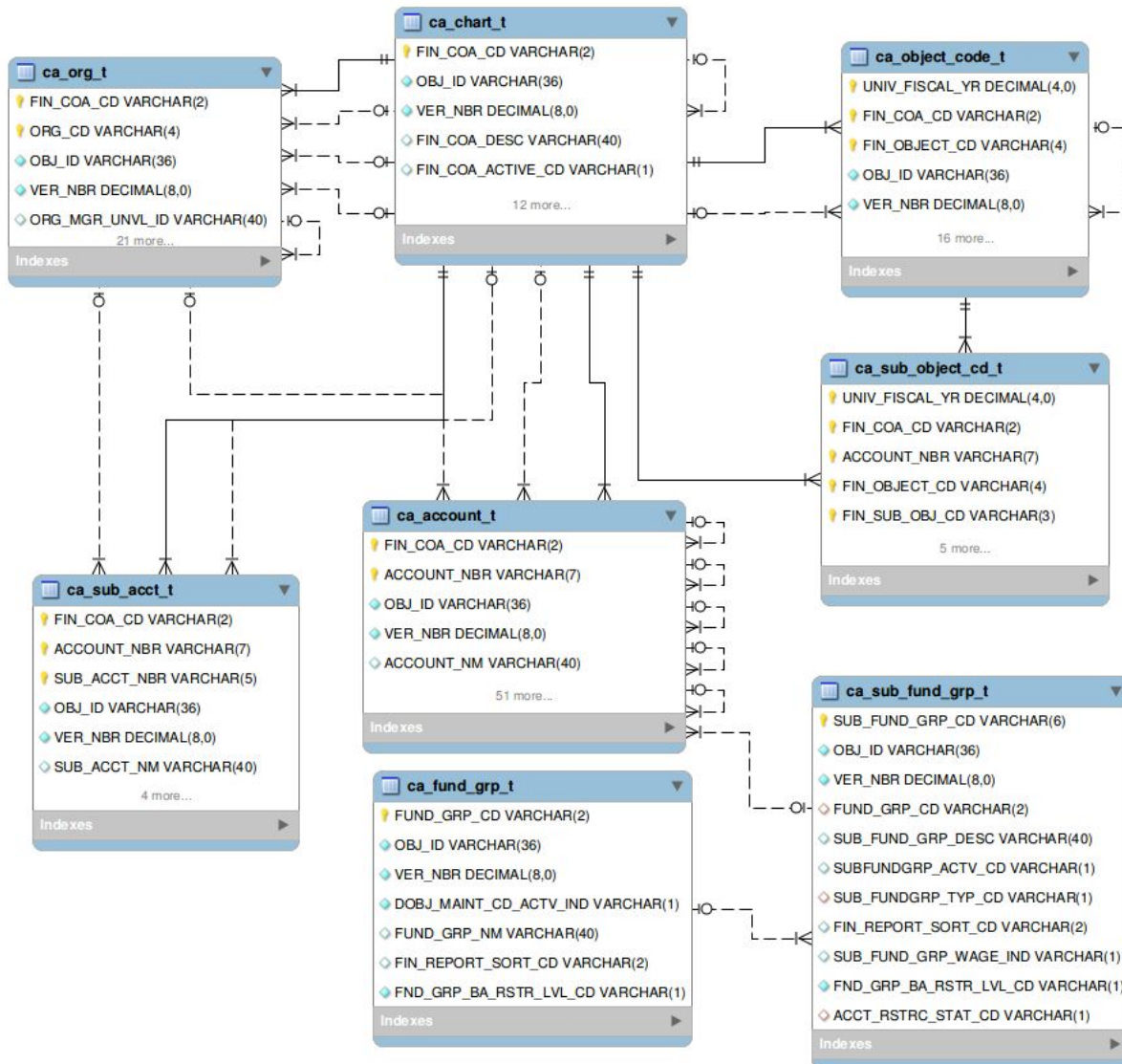
- Chart Code
- Account
- Organization
- Object Code

The Chart Code acts as a container of the other three elements - Account, Organization and Object Code. Account is used to identify a pool of funds assigned for a purpose. An account can belong to only one chart code and organization and is unique within the chart code. It also should belong to one sub fund group which in turn belongs to a fund group. An organization belongs to a chart code and can contain another organization. The Object Code describes the transaction type (Expense, Income, Asset, Liability, etc.) and belongs to one chart code. It has a

one year life (fiscal year) and belongs to one chart code. They can be used with all accounts in that chart code.

## Physical Data Model (Database Schema)

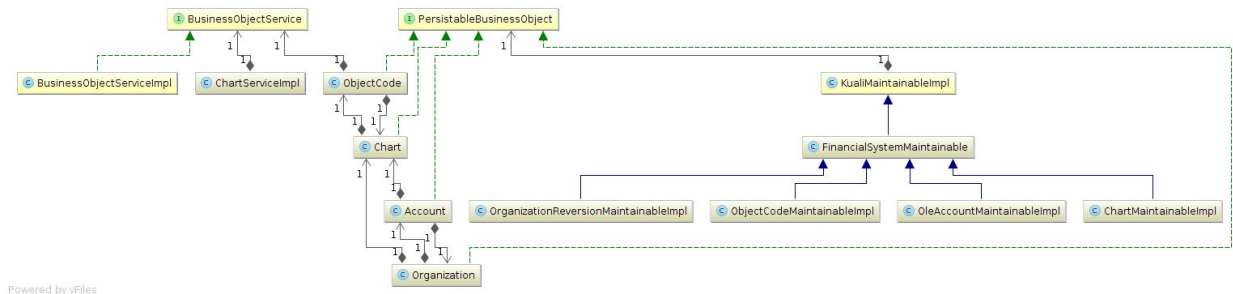
The chart related data is held in the chart table, *ca\_chart\_t*. The chart code, *FIN\_COA\_CD*, of the *ca\_chart\_t* table is referenced as a foreign key in all the other three main elements of the COA - Account (*ca\_account\_t*), Organization (*ca\_org\_t*) and Object Code (*ca\_object\_code\_t*). The Account related data is held in the *ca\_account\_t* table which references the sub fund group code (*SUB\_FUND\_GRP\_CD*) of the sub fund group table, *ca\_sub\_fund\_grp\_t*. The sub fund group in turns references the fund group code (*FUND\_GRP\_CD*) of the fund group table, *ca\_fund\_grp\_t*. The *ca\_object\_code\_t* table contains the Object code related data and has a fiscal year (*UNIV\_FISCAL\_YR*) and chart code referenced as foreign keys.



All tables with persistable data contains two properties by default – Version Number and Object Id. This is in order to take advantage of KRAD features. More information can be found in Rice Documentation [here](#).

## Service Interface Design (Java)

OLE inherits the COA structure from KFS. The COA data comprising, Chart, Account, Organization and Object Code are loaded into OLE through maintenance documents. Maintenance documents are primarily used for creating and maintaining data in OLE.



*Chart*, *Account*, *Organization* and *ObjectCode* are business object classes extending the *PersistableBusinessObject* of the Kuali framework, Rice. Each element has their own maintainable implementation class which extends the *FinancialSystemMaintainable* class which in turn extends the *KualiMaintainableImpl* class. The validation, loading and saving of the data is done in the *validateBusinessObjectForSave* and *linkAndSave* methods of the *BusinessObjectServiceImpl* class.

For more information, Javadocs can be found [here](#).

## Service Interface Design (SOAP/REST)

No Web services are available currently.

## User Interface Design

The COA maintenance documents uses KRAD's UIF (User Interface Framework). A very good guide on the framework can be found [here](#). The Spring Beans XML used are *Chart.xml*, *Account.xml*, *ObjectCode.xml* and *Organization.xml* under the *datadictionary* folder.

## Data Importing

It is currently not possible to import the data into OLE through any batch processes. However, considering OLE uses a RDBMS backend any data can be inserted using simple SQL queries.

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## Data Exporting (if applicable)

OLE uses a RDBMS backend and hence any data can be exported using simple SQL queries.

## Workflow

COA maintenance documents doesn't have any workflow defined by default. However, if needed it can be defined in files under olefs-> src-> main-> resources-> org.kuali-> workflows.

## System Parameters

Namespace Code	Parameter Name	Description
OLE-COA	ACCOUNT_ADDRESS_TYPE	Defines the cascading order for extracting the addresses
OLE-COA	DERIVED_ROLE_MEMBER_IN_ACTIVATION_NOTIFICATION_EMAIL_ADDRESSES	The e-mail address to send a notification to when a member of an account derived role - Fiscal Officer, Account Supervisor, Fiscal Officer Primary Delegate, or Fiscal Officer Secondary Delegate - is inactivated.
OLE-COA	FUND_GRP_CD	Fund Group Code DP
OLE-COA	INCOME_STREAM_ACCOUNT_REQUIRING_FUND_GROUPS	Determines for which fund groups an income stream account is required on the account document.
OLE-COA	INCOME_STREAM_ACCOUNT_REQUIRING_SUB_FUND_GROUPS	Determines for which sub fund groups an income stream account is required on the account document.
OLE-COA	PREFIXES	Institutionally specified restrictions on account number prefixes (e.g. if parameter values is '3;00', the account number cannot begin with a 3 or with 00.)
OLE-COA	PRIOR_YEAR_ACCOUNTS_TO_BE_ADDED	The list of accounts created after the start of a new fiscal year, but need to be used for the prior year and should be added to

		<p>the Prior Year Account table by the batch job addPriorYearAccountsJob. If no such account exist, this parameter shall be left empty; otherwise, the value shall be in the format of</p> <p>"coaCode1-accountNumber1;coaCode2-accountNumber2;coaCode3-accountNumber3" and so on; for example, the value "BL-0142900;BA-1111111;UA-1000000" defines 3 accounts to be added. The value of this parameter shall be updated after each year end, before running addPriorYearAccountsJob.</p>
OLE-COA	RESEARCH_ADMIN_AUTO_CREATE_ACCOUNT_WORKFLOW_ACTION	<p>This parameter defines the workflow action that will be taken on an account document automatically generated by an integrated research admin system. The possible parameter values are save submit and blanketApprove.</p>
OLE-COA	SUB_FUND_GRP_CD	Sub Fund Group Code
OLE-COA	ORGANIZATION_TYPES_NOT_REQUIRING_DEFAULT_ACCOUNT	<p>When a new organization is being created, the default account number is not required for these organization types. This is to avoid a chicken/egg situation where the value for the default account cannot be created until the organization exists.</p>
OLE-COA	ORGANIZATION_TYPES_THAT_MUST_REPORT_TO_SELF	<p>Defines the Organization Type that can / must report to itself when creating a new organization. This parameter should only contain 1 Organization Type; more will cause problems in the system. The system will only allow one Organization with this Organization Type, thus ensuring that there is a single Organization at the top of the hierarchy that all others report to.</p>
OLE-COA	USE_HRMS_ORGANIZATION_ATTRIBUTES_IND	<p>Flag (Y/N) indicating whether HRMS Org Tab will appear on the Organization document.</p>
OLE-COA	ENABLE_RESEARCH_ADMIN_OBJECT_CODE_ATTRIBUTE_IND	<p>Set this value to Y if you are using both Research Admin System and OLE and wish for KC budgets to use OLE Object Codes. This will cause the Research</p>

		Admin Attributes tab to appear on the Object Code document. Set this value to N if you are not using Research Admin System and OLE or if you wish Research Admin System to maintain a distinct list of object codes.
OLE-COA	OBJECT_CODES	Institutionally specified unallowable values for Object Codes.

## Roles and Permissions

Permissions are linked to roles which are in turn linked to Users to give them access to screens and functions.

Permission ID	Permission Name
OLE351	Serve as Account Supervisor
OLE352	Serve as Fiscal Officer
OLE353	Serve as Fiscal Officer Delegate
OLE380	Initiate Document GORV
OLE55	Initiate Document GOBJ
OLE56	Initiate Document ORGR
OLE58	Edit Inactive Account
OLE59	Serve as Account Manager
OLE60	Modify Maintenance Document Field SubAccount a21SubAccount
OLE61	Modify Maintenance Document Field Organization organizationPlantChartCode
OLE62	Modify Maintenance Document Field Organization organizationPlantAccountNumber
OLE63	Modify Maintenance Document Field Organization campusPlantChartCode
OLE64	Modify Maintenance Document Field Organization campusPlantAccountNumber



OLEMI834 2-PRM	Modify Maintenance Document Section SubAccount indirectCostRecoveryAccounts
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Role ID	Role Name	Permissions
OLE33	Active Professional Employee	OLE59, OLE351
OLE94	Active Professional Employee & Financial System User	OLE352
OLE93	Active Employee & Financial System User	OLE353
OLE37	Chart Manager	OLE55, OLE56, OLE61, OLE62, OLE63, OLE64, OLE380
OLE44	Manager	OLE58
OLE46	Plant Fund Accountant	OLE61, OLE62, OLE63, OLE64

## More Information on COA Tables

The COA tables are used across the system, especially, at different stages of procurement, in financial transactions. The below links describe the tables and the fields in great details and also contain data from implementing partners to facilitate better understanding.

<a href="#">Account workbook</a>
<a href="#">Account Guideline Workbook</a>
<a href="#">Chart workbook</a>
<a href="#">Object Consolidation workbook</a>
<a href="#">Object Level Workbook</a>
<a href="#">Object Sub Type workbook</a>
<a href="#">Object Code workbook</a>
<a href="#">Organization workbook</a>
<a href="#">Sub-Account Workbook</a>