Error Correction

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Purpose

OLE inherited a substantial portion involving finance from the Kuali Financial System (KFS). This includes functions involving General Ledger and transactions involving the Chart of Accounts. While dealing with funds, it is imperative to have a clear way to correct errors in a transparent manner. OLE provides the following ways in which errors can be corrected in transactions.

- General Error Correction document
- General Ledger Correction process document

The General Error Correction document is used to correct inappropriate or erroneous accounting data for general ledgers generated from other financial transactions. The General Ledger Correction process document, meanwhile, is used by central administration to correct errors that occur during General Ledger processing. It allows to correct errors in several different ways.

The following document would detail the data, tables and files involved and the process that is followed when the correction is done.

Dependencies (DB tables)

Tables part of Error Correction in OLE

| gl_acct_balances_t | General Ledger Account Balances |
|-------------------------|---|
| gl_acct_balances_hist_t | General Ledger Account Balances History |
| gl_balance_t | General Ledger Balance |
| gl_balance_hist_t | General Ledger Balance History |
| gl_sf_balances_t | General Ledger Sufficient Fund Balances |

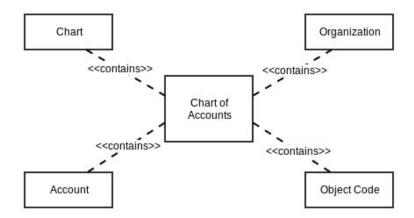
Tables where data is used/referenced in OLE

| fp_bal_by_cons_mt | Financial Processing Balance by Consolidation |
|----------------------|---|
| fp_bal_by_level_mt | Financial Processing Balance by Level |
| fp_bal_by_obj_mt | Financial Processing Balance by Object Code |
| fp_interim1_cons_mt | Financial Processing interim 1 consolidated |
| fp_interim1_level_mt | Financial Processing interim 1 level |

| fp_interim1_obj_mt | Financial Processing interim 1 Object code |
|----------------------|---|
| fp_interim2_cons_mt | Financial Processing interim 2 consolidated |
| fp_interim2_level_mt | Financial Processing interim 2 level |
| fp_interim2_obj_mt | Financial Processing interim 2 Object code |

NOTE: Tables ending with '_mt' are not empty tables. They are temporary tables. The abbreviation "MT" means "Move Table".

Logical Data Model



A transaction in OLE is not recorded against a particular account alone. It includes the Chart of Accounts viz. Chart, Account, Organization and Object Code and also a specific fiscal year. When errors are made in recording transactions it is imperative to provide the ability to change all or any of the various values that form a part of the transaction. Sub Account, Sub Object, Project are optional fields that are part of the transactions and are available to be edited as part of error correction.

The General Error Correction document is used to correct wrong accounting data for General Ledger entries generated from other financial transactions. As an example, if a wrong account has been debited to pay for an invoice, the General Error Correction document can be used to set right the transaction by moving funds. The document has standard financial transaction document tabs that lets users to move funds from the correct account to the erroneous account. The document also maintains reference to the erroneous transaction that is being corrected thereby preserving and maintaining the audit trail.

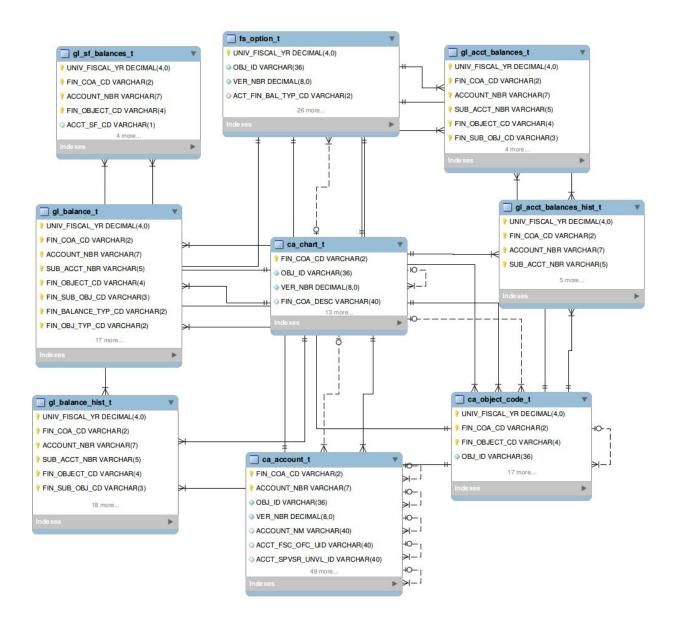
The General Ledger Correction Process document is used to correct errors encountered during any part of the validation process. The validation process of the transactions is taken care of by the Scrubber Job. The Scrubber performs - validation of data, offset and entry generation and error handling. The error handling function performed by the Scrubber identifies and demerges errors to be corrected. These errors are later corrected through the General Ledger Correction Process document.

Physical Data Model

There are no special tables that hold error related data. In the case of General Error Correction, the entries are stored in General Ledger Pending Entry table until the Scrubbing process. In case of the General Ledger Correction process, the data is not stored in tables. On the contrary, those that don't clear the validation process are output to an error file and kept away from tables until correction.

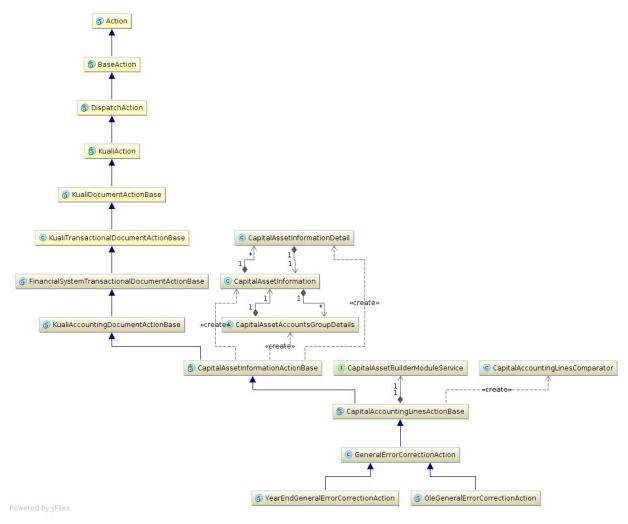
The chart related data is held in the chart table, <code>ca_chart_t</code>. The chart code, <code>FIN_COA_CD</code>, of the <code>ca_chart_t</code> table is referenced as a foreign key in all the other main elements of the COA - Account (<code>ca_account_t</code>) and Object Code (<code>ca_object_code_t</code>). The <code>ca_object_code_t</code> table contains the Object code related data and has a fiscal year (<code>UNIV_FISCAL_YR</code>) and chart code referenced as foreign keys. The General Ledger related tables (<code>gl_sf_balances_t</code>, <code>gl_balance_t</code>, <code>gl_balance_hist_t</code>, <code>gl_acct_balances_t</code>, <code>gl_acct_balances_hist_t</code>) is where budget related data is stored. And the General Ledger tables refer to <code>ca_chart_t</code>, <code>ca_account_t</code>, <code>ca_object_code_t</code> and <code>fs_option_t</code> through their primary keys <code>FIN_COA_CD</code>, <code>ACCOUNT_NBR</code>, <code>FIN_OBJECT_CD</code> and <code>UNIV_FISCAL_YR</code>, respectively.

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)

General Error Correction



The GeneralErrorCorrectionDocument class entending the

CapitalAccountingLinesDocumentBase class is the business object that represents General Error Correction (GEC) document in OLE. This is a transactional document that would post transactions to the General Ledger. It also integrates with the workflow and contains two groupings of accounting lines - from and to. The from accounting lines are the source lines and the to accounting lines are the target lines.

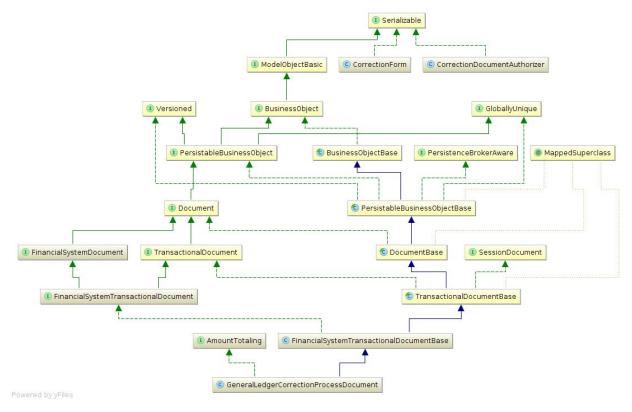
The GeneralErrorCorrectionForm class extending the CapitalAccountingLinesFormBase class is the Struts specific form object that works in conjunction with the business object to build the User Interface. The GeneralErrorCorrectionAction class extending the

CapitalAccountingLinesActionBase class piggy backs on all of the functionalities in the FinancialSystemTransactionalDocumentActionBase class.

The CapitalAccountingLinesActionBase class has various methods to take care of the various tasks that can be done in the GEC document. The *correct* method helps to create an error correction document, the *loadDocument* helps in loading the data, the *refresh* method helps in resetting data in the GEC document, the *insertAccountingLine* and *deleteAccountingLine* methods help in adding and removing accounting lines to either the source or target.

General Ledger Correction Process

The General Ledger (GL) processing takes place as part of the batch and the processes run at a given time for all pending transactions with the GL being updated after the processes have completed. The first process is the <u>Collector</u> job. It aggregates transactions from data sources for pending financial activity. The next process is the <u>Scrubber</u> job. It performs the validation of data, offset and entry generation and error handling after batch processes. The error handling part is when the files that are to be used in the GL Correction Process are generated. Finally the <u>Poster</u> job applies the pending entries to the GL.



The GeneralLedgerCorrectionProcessDocument class which extends the FinancialSystemTransactionalDocumentBase class allows the editing and processing of origin entry groups and the origin entries within them. The CorrectionDocumentServiceImpl class that implements the interface CorrectionDocumentService class and extends InitiateDirectoryBase

class has all the methods needed by General Ledger Correction Process to function. The CorrectionDocumentDaoOjb class implements the CorrectionDocumentDao class. The *getCorrectionDocumentsFinalizedOn* method queries the database and gets a collection of General Ledger Correction Process documents finalized on a given date.

Service Interface Design (REST if applicable)

Not Applicable

User Interface Design

Both the General Ledger Error Correction and the General Ledger Correction Process documents use KRAD's UIF (User Interface Framework). A very good guide on the framework can be found here.

Data Importing

Not Applicable

Data Exporting (if applicable)

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

Workflow

General Ledger Error Correction and General Ledger Correction process documents don't have any workflow defined by default. However, if needed it can be defined at *FinancialProcessingTransactionalDocuments.xml* and *GeneralLedgerDocuments.xml* files, respectively.

System Parameters

| Namespace Code | Parameter Name | Description |
|-------------------|---------------------------------------|---|
| OLE-GL | MAX_FILE_SIZE_ORIGIN_ENT RY_IMPORT | Maximum upload size for origin entry files within the General Ledger Correction Process. Must be an integer, optionally |

| | | followed by "K", "M", or "G". (Used by General Ledger Correction Process.) |
|--------|--------------------------------------|--|
| OLE-GL | RECORD_COUNT_FUNCTION ALITY_LIMIT | For the General Ledger Correction Process document, if the selected origin entry group contains more rows than the value of this parameter, then the document functionality will be restricted. In particular: 1) error if the user selected the "Manual Edit" "Edit Method" on the "Correction Process" (the user has to select another origin entry group or edit method); 2) the display of the search results tab will be disabled, regardless of what the "Edit Method" is; and 3) the display of the "show" button that normally appears below the checkboxes in the "Edit Options and Action" tab will not be rendered. |
| OLE-GL | RECORDS_PER_PAGE | The maximum number of origin entry that will be displayed per the General Ledger Correction Process search results page. |

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 |
|------------------|---------------------------|
| OLE75 | Initiate Document GLCP |
| OLE80162 | Initiate Document OLE_GEC |

| Role ID | Role Name | Permissions |
|----------|----------------|-------------|
| OLE45 | Operations | OLE75 |
| OLE10044 | OLE_Prepayment | OLE80162 |
| OLE10021 | OLE-Payment | OLE80162 |