

2016CTAC

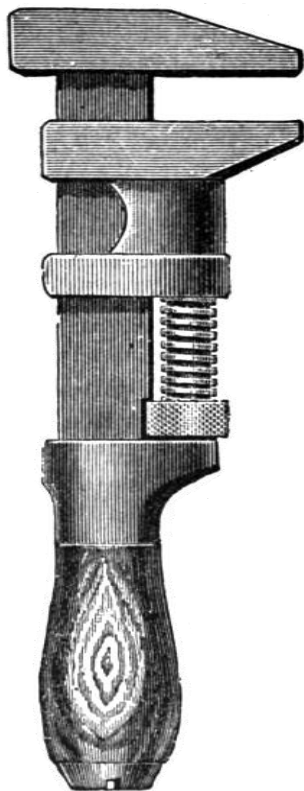
Graphical Business Rules

...or who needs SQL anyway?

Agenda

- Why
- How
- What

...but first, a history lesson



Does **A** anyone know what
this is? **AMANDA**
enterprise compliance management system
SQL

If it works, why fix it?

```
create or replace procedure DefaultAttempt_ARCH_00003000
  ( argProcessRSN int, argFolderRSN int, DUserId varchar2, argAttemptRSN int )
as
-- AMANDA Standard Variables
DECLARE n_ResultCode folderProcessAttempt.resultCode%Type;
DECLARE v_attemptComment folderProcessAttempt.AttemptComment%Type;

Etc.

-- Local Variables
DECLARE DateFinalS varchar2 (2000);
DECLARE DateFinalP varchar2 (2000);

BEGIN

--Get attempt details
toolkit.attemptDetails_Select(argProcessRSN, argAttemptRSN, n_ResultCode, v_AttemptComment, v_processComment, n_HourSpent,
n_OverTime, v_timeUnit, n_MileageAmount, n_ExpenseAmount);

IF n_HourSpent IS NULL THEN
  toolkit.p_displayError('Please enter the amount of time spent in the Time field');
END IF;

IF n_ResultCode = 9003 THEN --Complete
  UPDATE Folder
    SET Folder.StatusCode = 5 -- Closed
  WHERE Folder.FolderRSN = argFolderRSN;

Etc.

IF DateFinalP IS NULL THEN
  RAISE_APPLICATION_ERROR (-20001, 'Please enter a date for Final Notice Published to proceed.');
```

We are replacing with...

The screenshot shows a software interface for editing business rules. At the top, there are tabs for 'Business Rules' and 'Edit Rule - DEFAULTATTEMPT_TEST_00025003 *'. Below this, there are sub-tabs for 'Variables', 'Rule', 'Methods', and 'Test Cases'. The 'Rule' tab is active, displaying a list of actions on the left and their corresponding rule logic on the right. The actions listed are: If, Assign, Error, Warn, Decision, For, ForEach, Break, Continue, While, Case, Method, Rule, Delete, Comment, Quit, Log, SQL, and Raw. The rule logic consists of three conditional blocks:

```
IF HourSpent = 0
  Error('Please enter the time...')

IF n_ResultCode = Complete
  Folder_StatusCode = Closed;

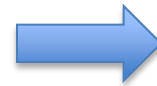
IF FinalNoticeSent is blank
  Error('Please enter a date ...')

IF FinalNoticePublished is blank
  Error('Please enter a date ...')
```

What about my SQL?



1



2



Setup a new rule

The screenshot displays the AMANDA ADMINISTRATION web interface. The top navigation bar includes 'System', 'Core', 'Modules', 'Display', and 'Help' menus, along with 'Clear Cache', 'French' language selection, and a search box. The main content area is titled 'Business Rule Detail - DEFAULTFEE_TEST_00025001'. The left sidebar shows a tree view with 'Business Rules' selected. The main panel contains the following fields:

- Rule Name:** DEFAULTFEE_TEST_NEW
- Description:** TEST new fee rule (English) and Description(French) (French)
- Rule Type:** Fee-New
- Folder Type:** TEST
- Process Code:** 25001
- Default Order:** Default Order
- Access Code:** Access Code
- Comments:** A text area for additional information.

At the bottom of the page, there is a '100%' zoom level indicator.

Define database variables (Model)

The screenshot displays the AMANDA Administration web application interface. The top navigation bar includes the AMANDA logo, a menu (System, Core, Modules, Display, Help), and utility links (Clear Cache, French, Search). The main content area is titled 'Edit Rule - DEFAULTFEE_TEST_NEW' and features a 'Variables' tab with sub-tabs for 'Rule', 'Methods', and 'Test Cases'. Under the 'Variables' tab, there are sub-tabs for 'Model', 'Local', 'Global', and 'SQL'. The 'Model' sub-tab is active, showing a tree view of database variables. The tree structure is as follows:

- Folder
 - Roof Permit Admin Percentile: 50% 60% 70% 80% 90% 100%
 - FolderType
 - StatusCode
 - SubCode
 - AccountBillFee (pick)
 - FolderComment
 - FolderInfo (pick)
 - FolderPeople (pick)
 - FolderProcess (pick)
 - Add Hold
 - Add Inspection (Roof-working)
 - Certificate of Completion
 - Final Issuance Review
 - (this) Misc Admin
 - AssignedUser
 - DisciplineCode
 - EndDate
 - ProcessCode
 - ScheduleDate
 - ScheduleEndDate
 - SignOffUser
 - StartDate
 - StatusCode
 - FolderProcessAttempt
 - (this)
 - ResultCode

Define local variables

The screenshot displays the AMANDA Administration web application. The main content area is titled "Edit Rule - DEFAULTFEE_TEST_NEW" and shows the configuration for local variables. The interface includes a navigation menu on the left, a top navigation bar with "System", "Core", "Modules", "Display", and "Help" menus, and a search bar. The "Variables" tab is active, and the "Local" sub-tab is selected. The variables are organized into a tree structure:

- LocalFeeType: String
- LocalFee: Double
- WS Cow Vaccinations
 - VaccinationDate: Timestamp
 - VaccinationKind: String
- WS Cow Detail
 - IdNumber: Integer
 - OwnerName: String
 - OwnerAddress: String
 - LastWeight: Double
 - DairyFlag: Boolean

Below these are several argument variables (arg) with their respective data types:

- argProcessRSN: Integer
- argFolderRSN: Integer
- argUserId: Integer
- argAttemptRSN: Integer
- argFolderType: String
- argProcessCode: Integer

https://demo-a7.csdcsystems.com/administration/GraphicalBusinessRules/GraphicalBusinessRule.jsp?RuleName=DEFAULTFEE_TEST_NEW#sub12

100%

Define global variables

The screenshot displays the AMANDA Administration web application interface. The main content area is titled "Edit Rule - DEFAULTFEE_TEST_NEW" and shows the configuration for a business rule. The "Variables" tab is active, and the "Global" sub-tab is selected. The configuration is organized into a tree structure with the following variables:

- Site**
 - Name: City of Westwood (String)
 - EmailServer: mail.cityofwestwood.gov (String)
- Code Enforcement**
- Health**
- Parks**
- Permits**
 - ReturnEmail: permits@cityofwestwood.gov (String)
 - DepartmentPhone: 1-888-555-1234 (String)
- Electrical Permits**
- Residential Permits**
- Roof Permits**
 - ConventionDate: 2016-09-26 (Timestamp)
 - NewRulesFlag: true (Boolean)
 - minSqFoot: 2000 (Integer)
 - ThisYear: 2016 (Integer)
- 2015**
- 2016**
 - ApplicationFeeAmount: 65.0 (Double)
 - RatePerSqFoot: 0.653 (Double)
- Class A**
- Class B**
- 2017**
 - DepartmentHead: John Smith (String)
- Plumbing Permits**
- Mechanical Permits**

The interface includes a navigation menu on the left with categories like "Folder", "Business Rules", and "Usage Tab". The top navigation bar shows "System", "Core", "Modules", "Display", and "Help" menus, along with "Clear Cache", "French", and a search box.

Define SQL

The screenshot displays the AMANDA Administration interface. The top navigation bar includes 'System', 'Core', 'Modules', 'Display', and 'Help'. On the right, there are links for 'Clear Cache', 'French', and a search box. The main content area is titled 'Business Rules' and shows a list of variables on the left: 'TotalFees', 'CattleLicence' (checked), and 'UnpaidFees'. The right pane is titled 'Edit Rule - DEFAULTFEE_TEST_NEW' and shows the SQL definition for the 'CattleLicence' variable. The variable is of type 'String'. The 'Get' method is defined as a SELECT query, and the 'Put' method is defined as an UPDATE query.

AMANDA ADMINISTRATION

System Core Modules Display Help

Clear Cache French Search

Orientation Folder

Business Rules Business Rule Detail - DEFAULTATTEMPT_TEST_00025001 Edit Rule - DEFAULTFEE_TEST_NEW

Variables Rule Methods Test Cases

Model Local Global SQL

1 Rows Returned

Folder

- Folder Type and Defaults
 - Attachment Tab
 - Comment Tab
 - Customizable Tabs
 - Document Tab
 - Fee Tab
 - Fixture Tab
 - Folder Tab
 - Info Tab
 - Process Tab
 - Milestone Tab
 - Relation Tab
- Rules Tab
 - Business Rules
 - Usage Tab

TotalFees
 CattleLicence
 UnpaidFees

Name: CattleLicence

Type: String

Get: SELECT LicenceNumber
FROM damoff.CattleLicences
WHERE ForeignNumber = :argFolderRSN

Put: UPDATE damoff.CattleLicences
SET LicenceNumber = :CattleLicence
WHERE ForeignNumber = :argFolderRSN

100%

Build Rule

AMANDA ADMINISTRATION System Core Modules Display Help Clear Cache French Search

Orientation Folder

Business Rules Business Rule Detail - DEFAULTATTEMPT_TEST_00025001 Edit Rule - DEFAULTFEE_TEST_NEW

1 Rows Returned

- Folder
 - Folder Type and Defaults
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 - Info Tab
 - Process Tab
 - Milestone Tab
 - Relation Tab
 - Rules Tab
 - Business Rules
 - Usage Tab

Variables Rule Methods Test Cases

If
Assign
Error
Warn
Decision
For
ForEach
Break
Continue
While
Case
Method
Rule
Delete
Comment
Quit
Log
SQL
Raw

LocalFeeType = 'New Fee'
(Decision Table)
IF (SubCode == 'Broker' (108))
 FeeAmount = LocalFee
ELSE
 FeeAmount = LocalFee * NumberStories

Decision Table

Conditions				Actions		
SubType	Work Type	Cost of Construction	Area	Cost 1	Cost 2	Cost 3
==	==	>=	>=	=	=	=
Residential	Class B	0	0	0	0	10
Residential	Class A	0	10,000	500	100	85
Residential	Class A	100,000	5000	100	20	10
Residential	Class A	50,000	5000	70	20	0
Residential	Class A	0	0	50	0	0
Commercial	Class B	0	0	0	0	50
Commercial	Class A	100,000	10,000	1000	200	100
Commercial	Class A	50,000	5000	200	40	20
Commercial	Class A	0	5000	140	40	0
Commercial	Class A	0	0	100	0	0

100%

Optional – build Methods

The screenshot shows the AMANDA Administration interface. The top navigation bar includes 'System', 'Core', 'Modules', 'Display', and 'Help'. The main content area is titled 'Business Rules' and shows 'Business Rule Detail - DEFAULTATTEMPT_TEST_00025001' and 'Edit Rule - DEFAULTFEE_TEST_NEW'. The 'Methods' tab is selected, showing a list of methods and a detailed view of the 'Global Weather' method.

The 'Methods' tab is active, showing a list of methods and a detailed view of the 'Global Weather' method. The list of methods includes:

- Balance (FolderRSN)
- CalculateDays (timestamp1, timestamp2)
- CountProcessAttempts (ProcessRSN)
- Decrypt (String)
- email (server, emailAddress_to, email_address_from)
- Encrypt (String)
- FolderNumber (FolderRSN)
- FormatDate (timestamp, Format)
- GetCompletePeopleAddress (PeopleRSN)
- getDate (year, month, date)

The detailed view of the 'Global Weather' method shows a tree structure of sub-methods:

- Global Weather
 - getWeather
 - City
 - Country
 - WeatherResult
 - getCitiesByCountry
 - Country
 - City

The interface also includes a search bar, a 'Clear Cache' button, and a 'French' language selector. The bottom status bar shows '100%' zoom.

Test your rule

AMANDA ADMINISTRATION

System Core Modules Display Help

Clear Cache French Search

Orientation Folder

Business Rules Business Rule Detail - DEFAULTATTEMPT_TEST_00025001 Edit Rule - DEFAULTFEE_TEST_NEW

1 Rows Returned

- Folder
 - Folder Type and Defaults
 - Attachment Tab
 - Comment Tab
 - Customizable Tabs
 - Document Tab
 - Fee Tab
 - Fixture Tab
 - Folder Tab
 - Info Tab
 - Process Tab
 - Milestone Tab
 - Relation Tab
 - Rules Tab
 - Business Rules
 - Usage Tab

Test Cases

Test Cases

Input Variable	Value
Sub Type	Residential
Work Type	Class B
Cost of Construction	300,000
Area	5,000
Fire Review	Passed

Output

Output Data	Expected Result	Actual Result
Folder Status	In Review	In Review
Fee	Review Fee	Review Fee
Fee Amount	\$120	\$100

Demo

2016CTAC

Thank you! Questions?