CiviCRM Developer Training 2014

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Resources

Extension Installation - http://wiki.civicrm.org/confluence/display/CRMDOC/Create+an+Extension http://wiki.civicrm.org/confluence/display/CRMDOC/Create+a+Module+Extension

Test Cases:

PHPUnit: http://wiki.civicrm.org/confluence/display/CRM/Setting+up+your+personal+testing+sandbox+HOWTO

Webtests: http://wiki.civicrm.org/confluence/display/CRM/Setting+yourself+up+to+work+with+Selenium+tests

Aims and Objectives

Day 1

- **How CiviCRM works** - code layout and architecture
- **Extending CiviCRM** - hooks, APIs, custom PHP files and templates.
- **Native Extension** - civix and more.
- **Internationalization** - including translation tools and multilingual sites

Day 2

- **Advanced features** - message templates, batch update via profile, checksum authentication, command-line scripts.
- **Testing** - unit tests and webtests
- **Debugging** - tips and tricks
- **Integration with Drupal and Joomla** - including user/contact synchronization, Profiles, Organic Groups, Views2, Joomla extensions

How CiviCRM Works - Components

CiviCRM is pear based.

- Quick Form
- Quick Form controller (for wizards, import mailing etc)
- BD_DataObject (precursor to active record. Think about data in terms of objects, rather than columns)
- Mail
- Smarty (used to be pear)

Templating is smarty based

Jquery for Javascript

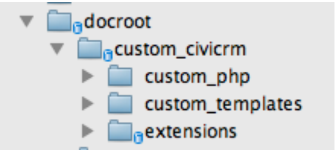
How CiviCRM Works - Codebase

Directory structure

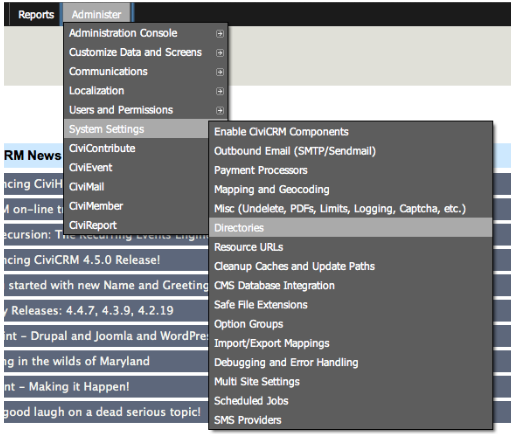
- top level is CRM for php, contains Business logic
    a. DAO stands for data access object
    b. BAO stands for business access object.
    c. Form - In general each page in CiviCRM which contains a form that maps to a file in one of the form directories
    d. Page - If a CiviCRM screen isn't a Form, it is probably a page
    e. xml - This directory contains a menu directory which maps urls to CRM form or page classes and controls access to these URLs using permissions.
- templates for tpl
- packages for third party libraries (this is the reason why CiviCRM is pretty large - 2/3 of the stuff is PEAR JS, etc.

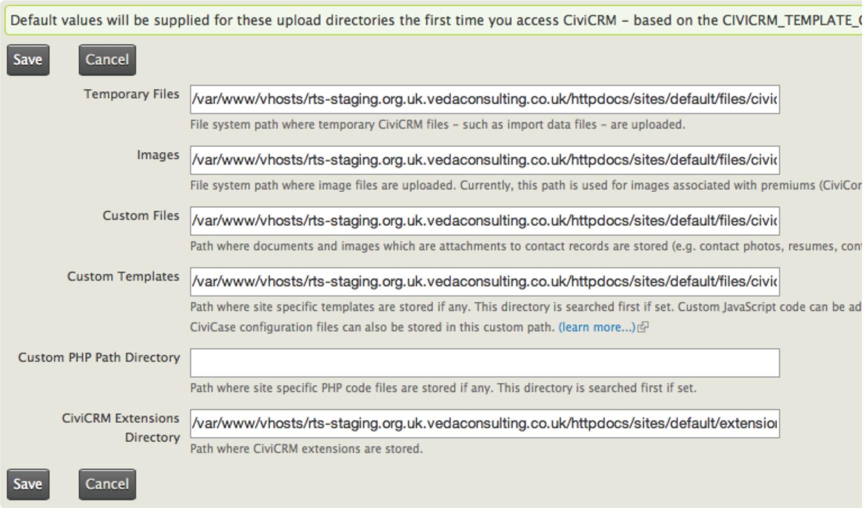
Prepare CiviCRM for amendments

Create Directories in your file system for custom code



Set CiviCRM directories accordingly





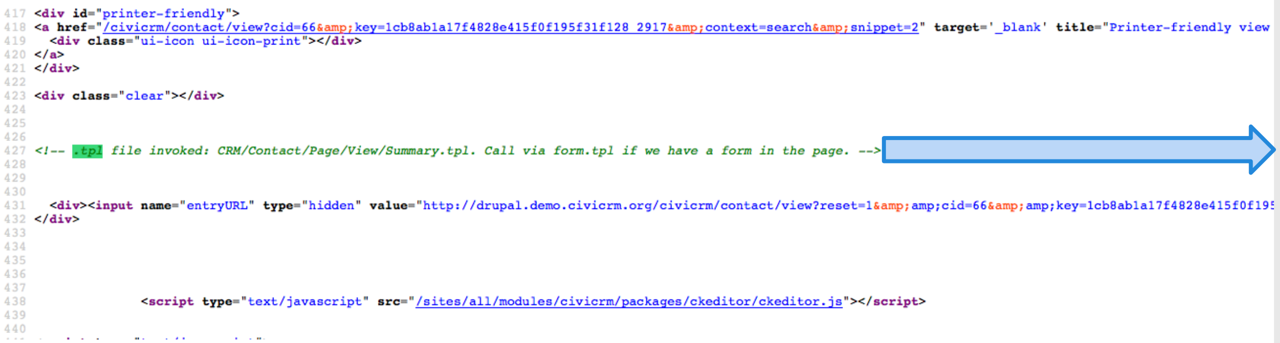
The Requirement

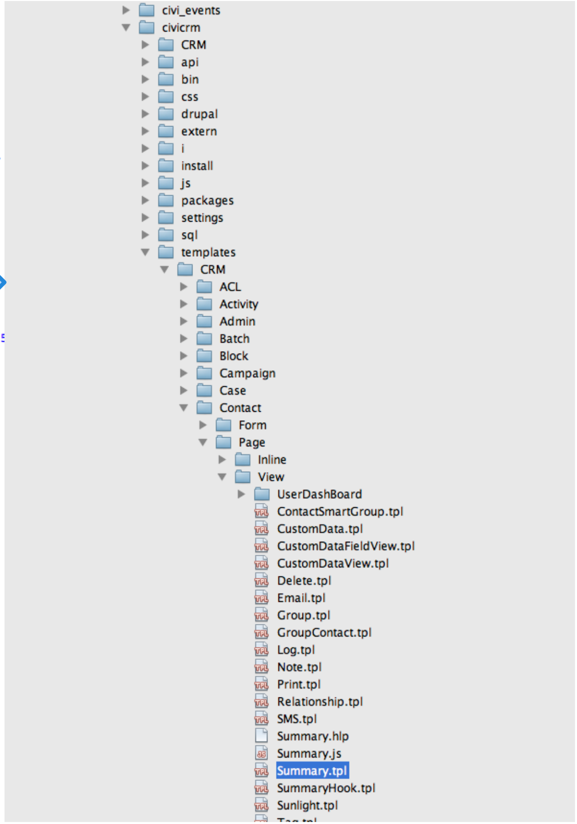
ACME Membership organisation would like to make some changes to the contact summary page.

1. Display the membership details from the membership tab on the summary page
2. Display a summary total of all contributions on the summary page

Where to start?

View the source of the page in question and find .tpl





Method 1: Override the template

Requirement:

- HTML
- CiviCRM API call from template (CiviCRM in-built API explorer comes in handy)

After locating the .tpl file, copy the .tpl to the custom template directory, retaining the directory structure as in Core templates directory.

Open the .tpl file & make the below changes

1. Make Contribution get API call for the contact (You can find the contact ID variable using debug) & calculate Contribution summary total and display in a HTML div/table.

2. Make Membership get API call for the contact and loop through the results and display the rows in a HTML table.

Method 1: Override the template

Pros

- Lots of customisations to the same file, no conflict of changes
- Easy to manage

Cons

- Needs to be reviewed during upgrades, as new fields/features might have been added in the upgraded version.
- Hard to spot changes unless commented well.
- Difficult to identify dependency on other work done to deliver the requirement

Method 2: Extra.tpl

Append HTML/Smarty code & jQuery functions to any template without having to create a customized copy of the entire file.

1. Rename/move the .tpl file in the custom template directory
2. Create a new .extra.tpl file (template_to_append_to.extra.tpl)
3. Redo/Copy the content added in above step (Method 1) into a DIV
4. Move the DIV to the desired location in the summary screen using Jquery functions. Make sure you use smarty {literal} tags.

Pros

- No need to review the customisation during upgrades, as we are not overriding any core templates.

Method 3: Using CiviCRM Hooks

Requirement:

Civix

CiviCRM API call from PHP (Refer CiviCRM in-built API explorer)

For implementing CiviCRM hooks, we need to create an extension

1. Generate Extension using Civix

   civix generate:module uk.co.vedaconsulting.training

2. Update 'info.xml' file in the extension directory

3. Enable the extension

4. Implement hook_civicrm_summary

   In summary hook, call CiviCRM API to get the Contribution summary total and Membership details