

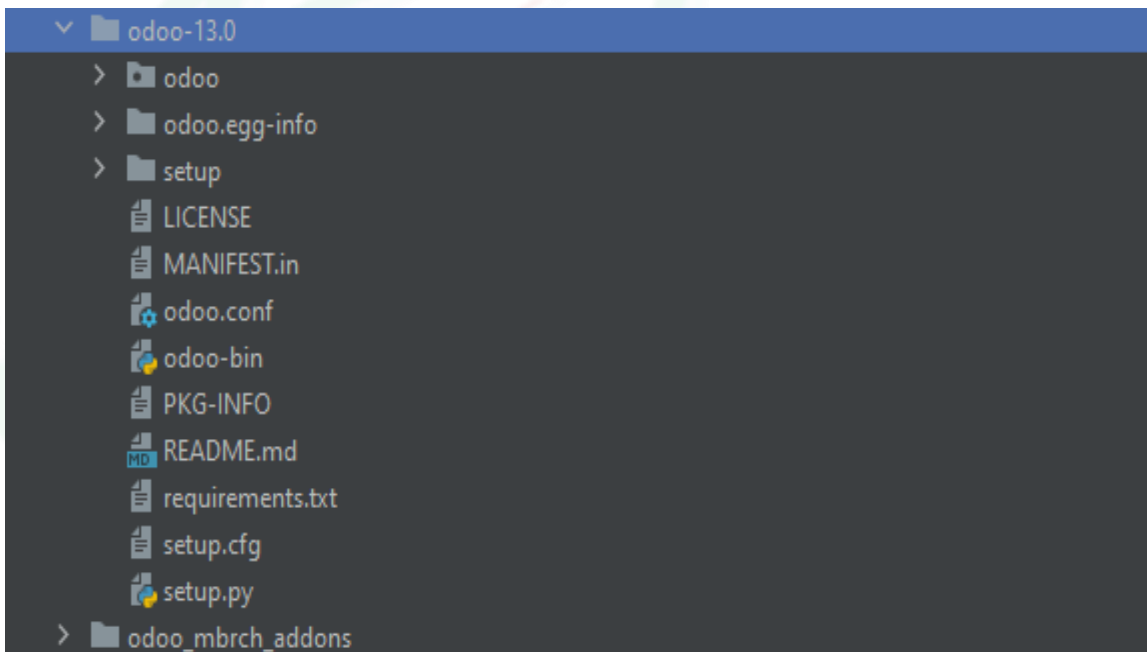
Source Code Architecture

1. Project Overview

- Project Name: MBRCH ERP SYSTEM
- Description: Business solution to manage employee's work and tasks and provide online services for clients (beneficiaries, partners, donors, upper management...) with handling accounting and management for all operations inside the charity.
- Odoo Version: Odoo 13 Community Version
- Modules:

base modules are located in odoo-13.0/odoo/addons

charity new and customized modules are located in odoo-13.0/odoo_mbrch_addons/mbrch_odoo



2. System Requirements

Odoo Version: Odoo 13 Community.

Python Version: Python 3.7.5

Database: PostgreSQL 12.0, 13.0, 14.0

Operating System: Ubuntu 20.04 or later, windows 10 or later

Brief:

Odoo 13 Community Version is the open-source edition of Odoo, offering a variety of essential business applications, including CRM, Sales, Inventory, Accounting (limited), and Project Management. It is free to use and highly customizable, making it a popular choice for small to medium-sized businesses looking for cost-effective solutions.

Key Features of Odoo 13 Community:

1. CRM and Sales: Basic customer and sales management.
2. Project Management: Task tracking and collaboration.
3. Inventory: Basic stock management.

Differences Between Odoo 13 Community and Enterprise

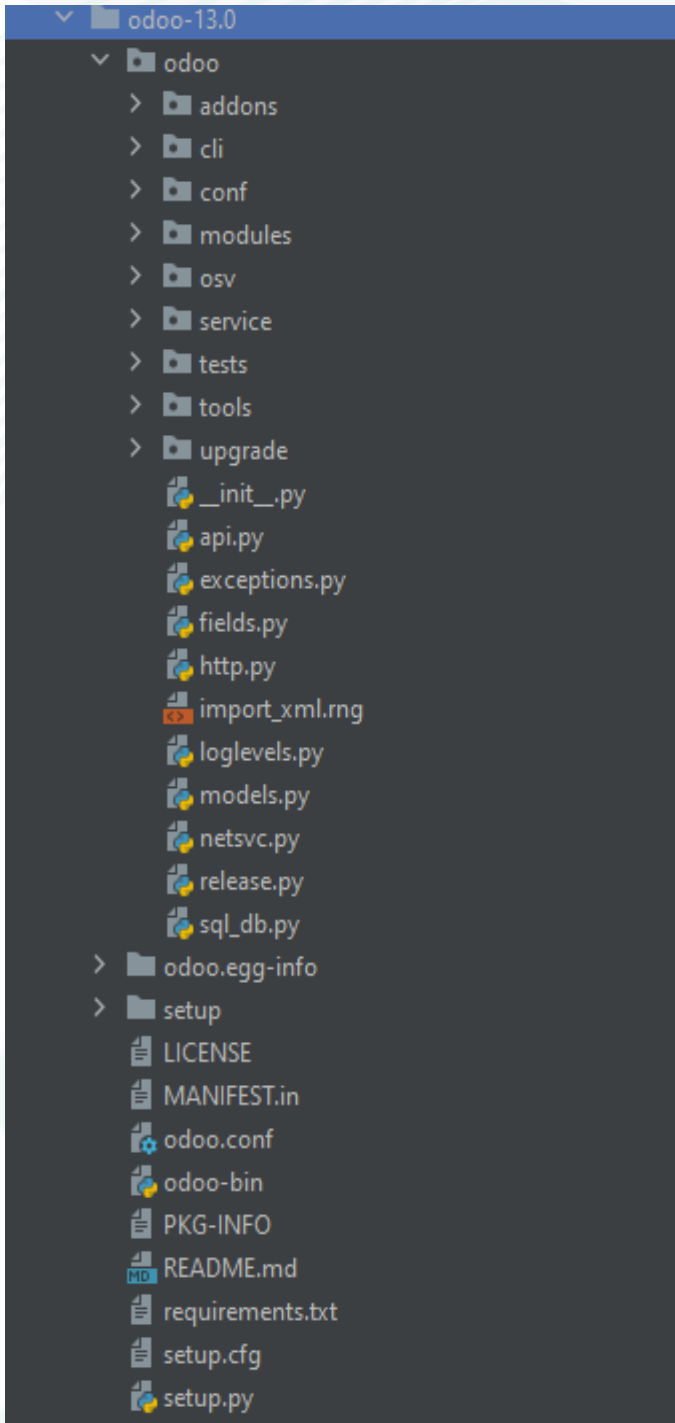
Feature	Community	Enterprise
License	Open-source (free)	Proprietary (paid subscription)
Customization	Full access to source code	Includes additional tools for customization, like advanced Studio.
Support	Community forums	Official support from Odoo.
Accounting	Basic features	Advanced accounting features (like localization and tax reports).
Modules	Limited features in HR, Manufacturing, etc.	Fully-featured apps for HR, Manufacturing, Maintenance, and more.
Mobile App	Generic PWA for mobile	Dedicated mobile app with offline capabilities.
Third-party Integrations	Limited	More integrations supported officially.
Performance Tools	Basic	Advanced performance tools and scalability options.

Suitable Use Cases

- **Community Version:** Ideal for startups, small businesses, and developers seeking flexibility and cost-efficiency.
- **Enterprise Version:** Better suited for larger organizations requiring advanced features, official support, and out-of-the-box solutions.

3. Technical Specifications

Base Odoo 13 setup, requirements and addons modules



Custom Modules:

- ▼ mbrch_odoo
 - > account_financial_report
 - > accounting_pdf_reports
 - > assign_new_online_order
 - > auditlog
 - > auth_api_key
 - > auth_session_timeout
 - > bureaucrat_helpdesk_lite
 - > crnd_service_desk
 - > crnd_web_diagram_plus
 - > crnd_web_list_popover_widget
 - > crnd_web_tree_colored_field
 - > crnd_wsd
 - > database_autobackup
 - > date_range
 - > Enterprise_guide
 - > evaluate_service
 - > financial_analysis
 - > generic_mixin
 - > generic_request
 - > generic_tag
 - > google_place_autocomplete
 - > isc_asset_management
 - > isc_attachment_extend
 - > isc_chatbot
 - > isc_customer_service
 - > isc_datepicker
 - > isc_employee_operation
 - > isc_hr_attendance
 - > isc_hr_attendance_overtime
 - > isc_hr_employee_evaluation
 - > isc_hr_employee_procedures
 - > isc_hr_holiday
 - > isc_hr_holiday_mbrch
 - > isc_hr_recruitment
 - > isc_hr_request
 - > isc_hr_training
 - > isc_list_view_search
 - > isc_mail_extend
 - > isc_mbrch_annual_plan
 - > isc_mbrch_calendar
 - > isc_mbrch_contacts
 - > isc_mbrch_employee_document
 - > isc_mbrch_expats_residence



- > isc_mbrch_guideline
- > isc_mbrch_hr
- > isc_mbrch_hr_attendance
- > isc_mbrch_internal_assistance
- > isc_mbrch_inventory
- > isc_mbrch_media
- > isc_mbrch_payment
- > isc_mbrch_payroll
- > isc_mbrch_project
- > isc_mbrch_report_layout
- > isc_mbrch_statements
- > isc_mbrch_theme
- > isc_mbrch_travel_ticket
- > isc_mbrch_website
- > isc_mobile_attendance
- > isc_mobile_notification
- > isc_mobile_project
- > isc_uae_pass
- > ks_binary_file_preview
- > ks_dashboard_ninja
- > mbrch_administrative_management
- > mbrch_charity_reports_apis
- > mbrch_emp_task
- > mbrch_in_out_office
- > mbrch_meetings_reports
- > mbrch_risk
- > oi_web_search
- > om_account_accountant
- > om_account_asset
- > om_account_budget
- > om_hr_payroll
- > percent_field
- > prt_report_attachment_preview
- > report_xlsx
- > server_environment
- > web_digital_sign
- > web_drop_target
- > web_fontawesome
- > web_google_maps
- > web_widget_timepicker
- > website_no_crawler

Technical Apps:

Description: These modules for providing enhancements and new features for system users

1. Auditlog
2. auth_session_timeout
3. bureaucrat_helpdesk_lite
4. crnd_service_desk
5. crnd_web_diagram_plus
6. crnd_web_list_popover_widget
7. crnd_web_tree_colored_field
8. crnd_wsd
9. database_autobackup
10. date_range
11. generic_mixin
12. generic_request
13. generic_tag
14. google_place_autocomplete
15. isc_attachment_extend
16. isc_datepicker
17. isc_list_view_search
18. isc_mail_extend
19. isc_mbrch_theme
20. isc_uae_pass
21. ks_binary_file_preview
22. oi_web_search
23. percent_field
24. prt_report_attachment_preview

25. report_xlsx
26. server_environment
27. website_no_crawler
28. web_digital_sign
29. web_drop_target
30. web_fontawesome
31. web_google_maps
32. web_widget_timepicker

Accounting Department Apps:

Description: These modules for providing accounting customizations, reporting and new features

1. accounting_pdf_reports
2. account_financial_report
3. financial_analysis
4. isc_asset_management
5. isc_mbrch_annual_plan
6. isc_mbrch_payment
7. isc_mbrch_statements
8. om_account_accountant
9. om_account_asset
10. om_account_budget

Management Department Apps:

Description: These modules for providing data analysis, KPIS, Dashboards and guidelines for users.

1. Enterprise_guide
2. isc_mbrch_contacts
3. isc_mbrch_guideline
4. isc_mbrch_report_layout
5. ks_dashboard_ninja
6. mbrch_administrative_management
7. mbrch_charity_reports_apis
8. mbrch_in_out_office
9. mbrch_meetings_reports
- 10.mbrch_risk

Human Resources Department Apps:

Description: These modules for providing employee's procedures and working info related to charity Human Resource's Terms and laws (leaves, attendances, salaries, travel tickets, etc...)

1. isc_employee_operation
2. isc_hr_attendance
3. isc_hr_attendance_overtime
4. isc_hr_employee_evaluation
5. isc_hr_employee_procedures
6. isc_hr_holiday
7. isc_hr_holiday_mbrch

8. isc_hr_recruitment
9. isc_hr_request
10. isc_hr_training
11. isc_mbrch_employee_document
12. isc_mbrch_expats_residence
13. isc_mbrch_hr
14. isc_mbrch_hr_attendance
15. isc_mbrch_payroll
16. isc_mbrch_travel_ticket
17. mbrch_emp_task
18. om_hr_payroll

Mobile Application Routes:

Description: These modules for providing Mobile APIS and Routing Process for presented services via charity application.

1. auth_api_key
2. isc_mbrch_calendar
3. isc_mobile_attendance
4. isc_mobile_notification
5. isc_mobile_project

Internal Assistance Department Apps:

Description: These modules for providing required services for users and employees like (beneficiaries aids, profiles, complete documents and employee's working flows...)

1. assign_new_online_order
2. isc_mbrch_internal_assistance

Customer Service Department Apps:

Description: These modules for providing customer services tickets managements presented via charity customer service.

1. evaluate_service
2. isc_customer_service

Website Apps:

Description: These modules for providing website UI/UX templates and online portal services.

1. isc_chatbot
2. isc_mbrch_website

Inventory Apps:

Description: These modules for providing inventory business management and warehouses move lines and products, scrabs and delivery reports, etc...

1. isc_mbrch_inventory

Media Apps:

Description: These modules for providing advertising for charity donations and projects and campaigns made by the charity.

1. isc_mbrch_media

Internal/External Projects Apps:

Description: These modules for providing projects business management and project's execution phases and steps with archiving images, videos and documents about all projects activities

1. isc_mbrch_project

module details and hierarchy coding:

```
<module_name>/
├─ __init__.py
├─ __manifest__.py
├─ models/
│   └─ __init__.py
│   └─ <model_file_1>.py
│   └─ <model_file_2>.py
├─ views/
│   └─ <view_file_1>.xml
│   └─ <view_file_2>.xml
│   └─ <menu_file>.xml
├─ security/
│   └─ ir.model.access.csv
│   └─ security.xml
├─ data/
│   └─ <data_file_1>.xml
│   └─ <data_file_2>.xml
├─ demo/
│   └─ <demo_file_1>.xml
├─ controllers/
│   └─ __init__.py
│   └─ <controller_file>.py
├─ reports/
│   └─ <report_template>.xml
│   └─ <report_file>.py
├─ static/
│   └─ description/
│       └─ icon.png
│       └─ index.html
│   └─ src/
│       └─ css/
│       └─ js/
│       └─ img/
└─ wizards/
    └─ __init__.py
    └─ <wizard_file>.py
```

Detailed Explanation of the Module Hierarchy

1. Module Root Files

- `__init__.py`: This file is used to declare Python packages. It indicates that the directory should be treated as a Python package. It imports submodules like models, controllers, and wizards.
- `__manifest__.py`: Contains the module's metadata and configuration, including dependencies, description, and module data.

2. models/ Directory

- Purpose: Contains Python files that define the business logic and data models. Each model represents a database table in Odoo.
- `__init__.py`: Imports all Python files in the models/ directory to register them in Odoo.
- `<model_file>.py`: Python classes representing models (e.g., `res.partner`, `sale.order`). They define fields, methods, and behaviours.

3. views/ Directory

- Purpose: Contains XML files that define the user interface—form views, list views, kanban views, and menu items.
- `<view_file>.xml`: Defines individual views (forms, lists).
- `<menu_file>.xml`: Defines menus and action links to the views.

4. security/ Directory

- Purpose: Manages access control rules and group permissions.
- `ir.model.access.csv`: CSV file defining access rights (read, write, create, delete) for models.
- `security.xml`: XML file defining record rules and groups.

5. data/ Directory

- Purpose: Contains initial data files loaded when the module is installed, such as default records, configuration settings, and actions.

- <data_file>.xml: Defines records, configurations, and automated actions.

6. demo/ Directory

- Purpose: Contains demo data for showcasing or testing module functionality. Loaded only if the database is in demo mode.

7. controllers/ Directory

- Purpose: Contains Python files defining web controllers that handle HTTP requests and responses, allowing interaction with the system from web pages.
- <controller_file>.py: Defines endpoints for web and portal views.

8. reports/ Directory

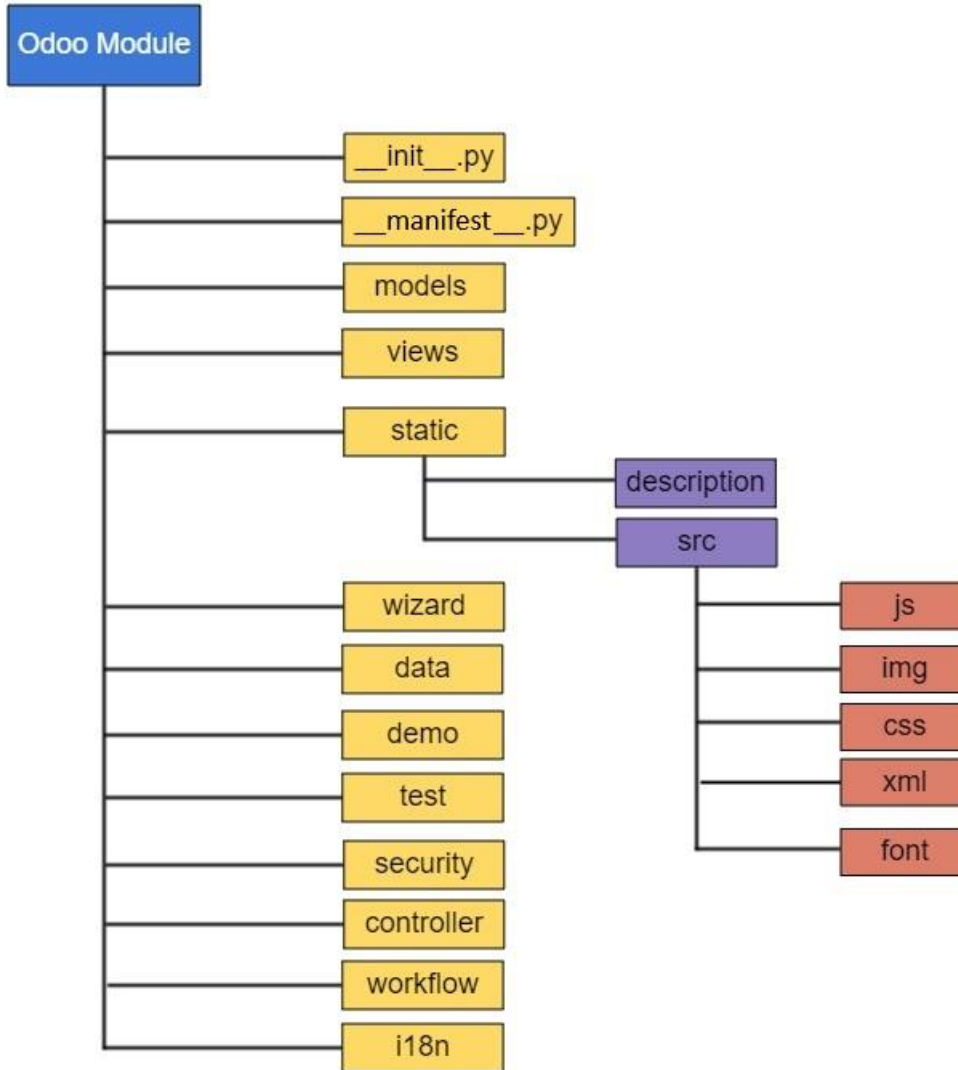
- Purpose: Contains report templates (XML) and report definition files (Python) for generating PDFs, Excel sheets, or other report formats.
- <report_template>.xml: Defines the template layout for reports.
- <report_file>.py: Custom Python code for report rendering.

9. static/ Directory

- Purpose: Contains static files used by the module, such as images, CSS, and JavaScript files.
 - description/: Includes assets used in the Odoo Apps Store or module info, like icon.png.
 - src/: Contains subdirectories for CSS (css/), JavaScript (js/), and images (img/).

10. wizards/ Directory

- Purpose: Contains Python files defining wizard models—transient models for forms that interact with the user and execute multi-step operations.
- <wizard_file>.py: Defines wizards and their logic.



The `__manifest__.py` file is the configuration file in each application(module)

this is an example of manifest file:

```
{
  'name': 'Custom Sales Module', # The name of the module as displayed in the Odoo app list.
  'version': '1.0.0',           # The version of the module, following semantic versioning.
  'summary': 'Enhances the sales workflow with custom features.', # A short summary of the module's purpose.
  'description': """
Custom Sales Module
=====
This module adds custom features to the sales workflow, including:
- Automated discounts
- Custom reporting for sales orders
- Integration with third-party services
""", # A detailed description of the module.
  'author': 'Your Name or Company', # The author of the module.
  'website': 'https://www.yourcompany.com', # The website of the author or module.
  'category': 'Sales', # The functional category of the module (e.g., Sales, Inventory).
  'depends': ['sale', 'stock'], # List of modules that this module depends on. These must be installed first.
  'data': [
    'security/ir.model.access.csv', # Security access rules.
    'views/sale_order_view.xml', # XML files defining views.
    'data/discount_rules.xml', # Data files (e.g., for default records).
  ], # List of data files loaded during module installation.
  'demo': [
    'demo/sale_demo.xml', # Demo data for testing or demonstration purposes.
  ], # Demo data loaded only in demo mode.
  'installable': True, # Whether the module can be installed.
  'application': True, # Whether the module is an application (shown in the main menu).
  'auto_install': False, # Whether the module is installed automatically when its dependencies are installed.
  'license': 'LGPL-3', # The license under which the module is distributed.
}
```

these applications(modules) are the addons required for the main operations in all sections inside the charity:

1. Management Dep.
2. Accounting Dep.
3. Inventory Dep.
4. Human Resources Dep.
5. Internal Assistance Dep.
6. External Assistance Dep.
7. Internal Projects Dep.
8. External Projects Dep.
9. Customer Service Dep.
10. Media Dep.
11. IT Dep.