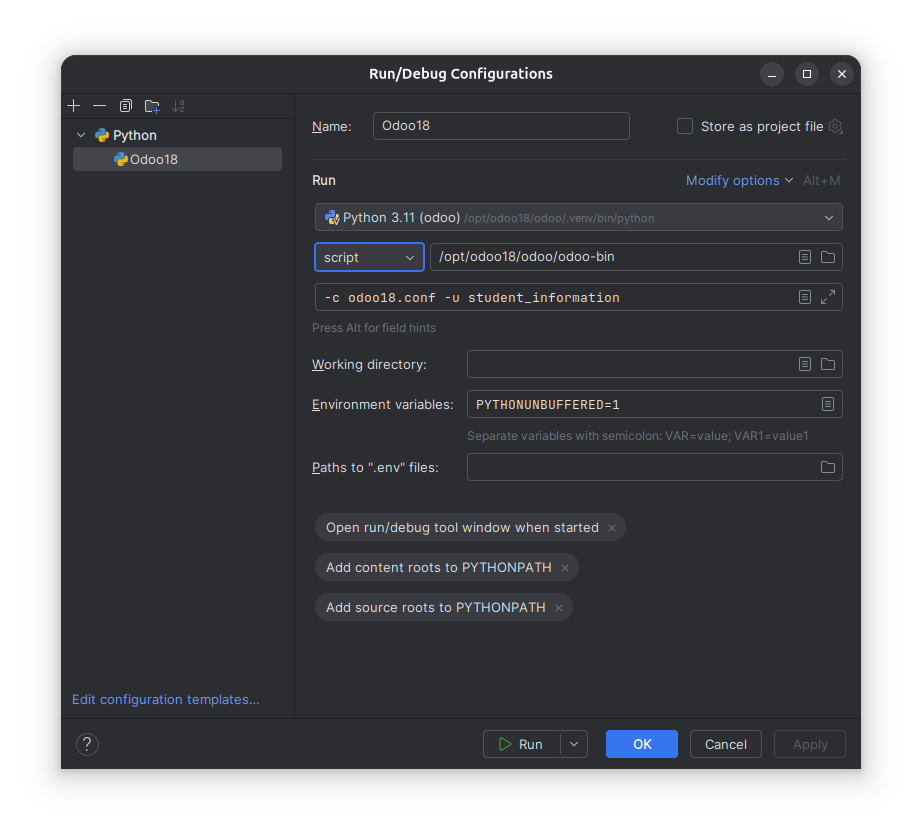
Tab 1

**Odoo with IDE ( using PyCharm )**

* Install required version.
* Make all the packages installed properly.
* Select the odoo folder in the new project section.
* Identify the location of odoo-bin python file.
* Identify the location of the odoo conf file and get the path.

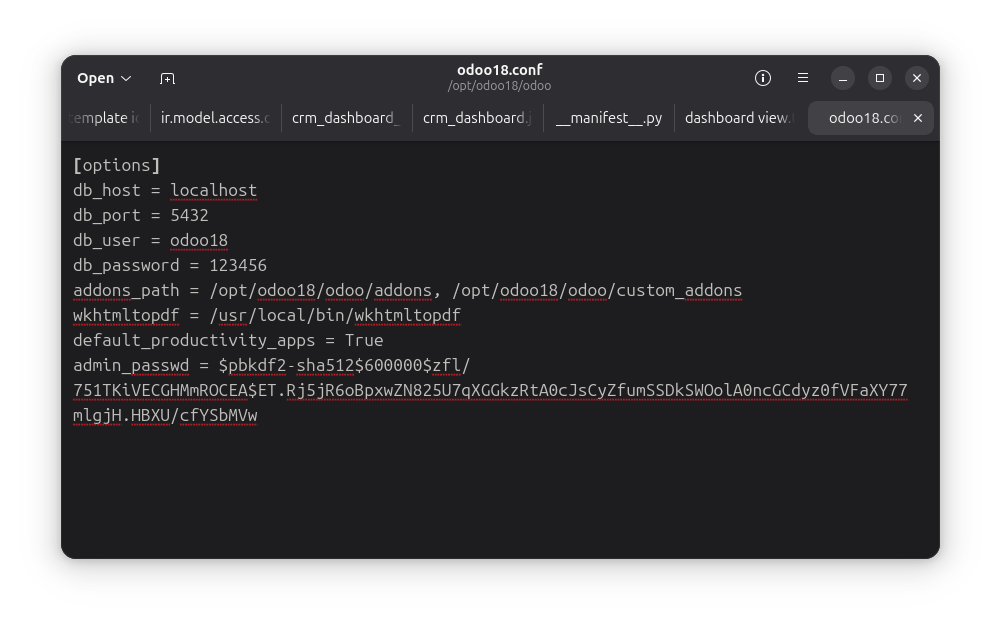
**The run configuration need to set like this**

1. Odoo version supports python version selection.
2. Select the script and bin path should be properly defined.
3. [ -c odoo18.conf -u student\_information ] this command assigned for upgradation for the module



**Odoo conf file update**

* Identify the location of the odoo conf file and get the path.
* Now update these attributes as below,



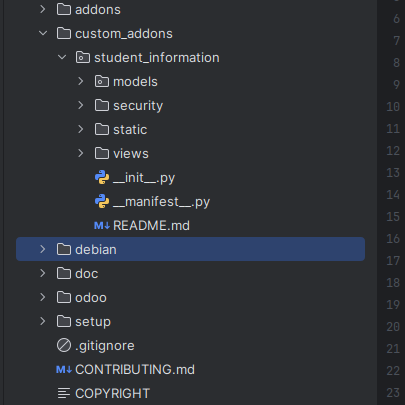
* Here the custom\_addons path is essential for creating our own customized modules because the default addons can not be changed
* The addons path can be identified as the file location handeled.

**ProsgresSQL database setup**

* Install the prosgressql for the database.
* Give it the proper user and authentication items to access the database from pycharm and odoo server.

**Basic File Structure**

* Under the custom addons directory create a directory named as the module.
* Then create all the basic directories and files to run the odoo server.
* Models, security, static, views basic directories and \_\_init\_\_.py, \_\_manifest\_\_.py
* The above point is the basic directories and files.



**Basic File contents**

* **In model directory:** [ all the data tables are handled here ]
* \_\_init\_\_.py ( basic file ) which initializes all the models(table) to the module.
* Others are all the database table models generated here.
* **In security directory:** the security between models and views handled here.
* **In static directory:** [ it contains the ( src ) directory ]
* Img( images ), xml( templates ), js( java script ) files contained here.
* **In views directory:** [ contains all the user interface views xml files, actions, and records ].
* **\_\_init\_\_.py:** this file initialises the root model of the module.

( from . import models )

* **\_\_manifest\_\_.py:** this file contains all the attributes which are essential for run the module in oddo server as below,

{

'name': 'School Management',

'version': '1.0',

'category': 'Education',

'summary': 'Manage student information',

'depends': ['base'],

'data': [

'security/ir.model.access.csv',

'views/students\_views.xml',

'views/teacher\_views.xml',

'views/configuration\_views.xml',

'views/menu.xml',

'views/school\_student\_report.xml',

'views/school\_teacher\_report.xml',

'views/dashboard\_views.xml',

],

'assets': {

'web.assets\_backend': [

'student\_information/static/src/js/school\_dashboard.js',

'student\_information/static/src/xml/school\_dashboard\_templates.xml',

],

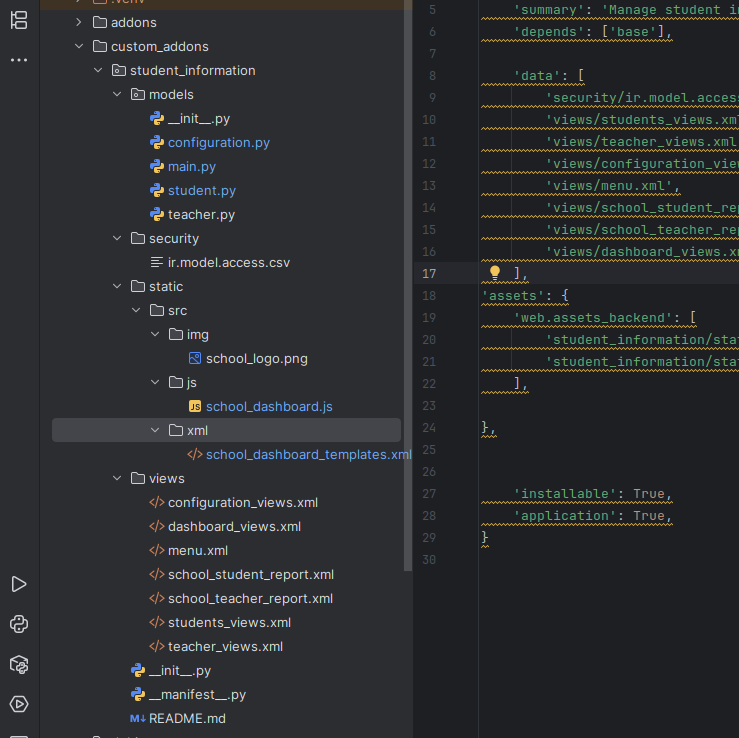
},

'installable': True,

'application': True,

}

Here the manifest file contains ( data ) attribute which initializes the modulus security file and views xm files, ( assets ) attribute which initializes the backends as like js,template xml files. So the ultimate minimum basic structure would be that as like below,



* **So the Static director: [ img, js, xml ]**
* **img** directory: contains all the images, icons, logos.
* **js** directory: contains all the javascript codes as ( .js ) file.
* **xml** directory: contains the templates ( .xml ) files.

**All the views**

* **student\_views.xml**

<odoo>

<!-- Search View -->

<record id="view\_school\_student\_search" model="ir.ui.view">

<field name="name">school.student.search</field>

<field name="model">school.student</field>

<field name="arch" type="xml">

<search string="Search Students">

<field name="class\_id"/>

<field name="section\_id"/>

<field name="institution\_id"/>

<field name="name"/>

<field name="roll\_number"/>

</search>

</field>

</record>

<!-- Student Form View -->

<record id="view\_school\_student\_form" model="ir.ui.view">

<field name="name">school.student.form</field>

<field name="model">school.student</field>

<field name="arch" type="xml">

<form string="Student">

<sheet>

<group>

<field name="name"/>

<field name="roll\_number"/>

<field name="age"/>

<field name="gender"/>

<field name="date\_of\_birth"/>

<field name="email"/>

<field name="phone"/>

<field name="class\_id"/>

<field name="section\_id"/>

<field name="institution\_id"/>

<field name="address"/>

<field name="student\_image" widget="image" class="oe\_avatar" options="{'preview\_image': 'student\_image'}"/>

</group>

</sheet>

</form>

</field>

</record>

<!-- Student List View -->

<record id="view\_school\_student\_list" model="ir.ui.view">

<field name="name">school.student.list</field>

<field name="model">school.student</field>

<field name="arch" type="xml">

<list string="Students">

<field name="student\_image" widget="image" class="oe\_avatar"

options="{'preview\_image': 'student\_image'}"/>

<field name="name"/>

<field name="roll\_number"/>

<field name="age"/>

<field name="gender"/>

<field name="email"/>

<field name="class\_id"/>

<field name="section\_id"/>

<field name="institution\_id"/>

</list>

</field>

</record>

<!-- Action -->

<record id="action\_school\_student" model="ir.actions.act\_window">

<field name="name">Students</field>

<field name="res\_model">school.student</field>

<field name="view\_mode">list,form</field>

</record>

</odoo>

* **teacher\_views.xml**

<odoo>

<record id="view\_school\_teacher\_form" model="ir.ui.view">

<field name="name">school.teacher.form</field>

<field name="model">school.teacher</field>

<field name="arch" type="xml">

<form string="Teacher">

<sheet>

<group>

<field name="name"/>

<field name="employee\_id"/>

<field name="gender"/>

<field name="phone"/>

<field name="email"/>

<field name="address"/>

<field name="hire\_date"/>

<field name="teacher\_image" widget="image" class="oe\_avatar" options="{'preview\_image': 'teacher\_image'}"/>

</group>

</sheet>

</form>

</field>

</record>

<record id="view\_school\_teacher\_list" model="ir.ui.view">

<field name="name">school.teacher.list</field>

<field name="model">school.teacher</field>

<field name="arch" type="xml">

<list string="Teachers">

<field name="teacher\_image" widget="image" class="oe\_avatar" options="{'preview\_image': 'teacher\_image'}"/>

<field name="name"/>

<field name="employee\_id"/>

<field name="phone"/>

<field name="email"/>

<field name="hire\_date"/>

</list>

</field>

</record>

<record id="action\_school\_teacher" model="ir.actions.act\_window">

<field name="name">Teachers</field>

<field name="res\_model">school.teacher</field>

<field name="view\_mode">list,form</field>

</record>

</odoo>

* **menu\_view.xml**

<odoo>

<!-- Root of Menu -->

<menuitem id="school\_menu\_root" name="School" sequence="20"/>

<!-- Add to Menu -->

<!-- Students under School-->

<menuitem id="menu\_school\_students" name="Students" parent="school\_menu\_root" sequence="2"/>

<menuitem id="menu\_school\_student\_action" name="Manage Students"

parent="menu\_school\_students"

action="action\_school\_student" sequence="1"/>

<!-- Teachers under School-->

<menuitem id="menu\_school\_teachers" name="Teachers" parent="school\_menu\_root" sequence="3"/>

<menuitem id="menu\_school\_teacher\_action" name="Manage Teachers"

parent="menu\_school\_teachers"

action="action\_school\_teacher" sequence="1"/>

<!-- Configuration -->

<menuitem id="menu\_school\_configuration" name="Configuration" parent="school\_menu\_root" sequence="4"/>

<!-- Classes under Configuration -->

<menuitem id="menu\_school\_class" name="Classes"

parent="menu\_school\_configuration"

action="action\_school\_class" sequence="1"/>

<!-- Sections under Configuration -->

<menuitem id="menu\_school\_section" name="Sections"

parent="menu\_school\_configuration"

action="action\_school\_section" sequence="2"/>

<!-- Institution under Configuration -->

<menuitem id="menu\_school\_institution" name="Institution Name"

parent="menu\_school\_configuration"

action="action\_school\_institution" sequence="3"/>

</odoo>

* **configuration\_views.xml**

<odoo>

<!-- Class Form -->

<record id="view\_school\_class\_form" model="ir.ui.view">

<field name="name">school.class.form</field>

<field name="model">school.class</field>

<field name="arch" type="xml">

<form string="Class">

<sheet>

<group>

<field name="name"/>

</group>

</sheet>

</form>

</field>

</record>

<!-- Class List -->

<record id="view\_school\_class\_list" model="ir.ui.view">

<field name="name">school.class.list</field>

<field name="model">school.class</field>

<field name="arch" type="xml">

<list string="Classes">

<field name="name"/>

</list>

</field>

</record>

<!-- Section Form -->

<record id="view\_school\_section\_form" model="ir.ui.view">

<field name="name">school.section.form</field>

<field name="model">school.section</field>

<field name="arch" type="xml">

<form string="Section">

<sheet>

<group>

<field name="name"/>

</group>

</sheet>

</form>

</field>

</record>

<!-- Section List -->

<record id="view\_school\_section\_list" model="ir.ui.view">

<field name="name">school.section.list</field>

<field name="model">school.section</field>

<field name="arch" type="xml">

<list string="Sections">

<field name="name"/>

</list>

</field>

</record>

<!-- institution from -->

<record id="view\_school\_institution\_form" model="ir.ui.view">

<field name="name">school.institution.form</field>

<field name="model">school.institution</field>

<field name="arch" type="xml">

<form string="Institution">

<sheet>

<group>

<field name="name"/>

</group>

</sheet>

</form>

</field>

</record>

<!-- Instruction List -->

<record id="view\_school\_institution\_list" model="ir.ui.view">

<field name="name">school.institution.list</field>

<field name="model">school.institution</field>

<field name="arch" type="xml">

<list string="Institution">

<field name="name"/>

</list>

</field>

</record>

<record id="action\_school\_class" model="ir.actions.act\_window">

<field name="name">Classes</field>

<field name="res\_model">school.class</field>

<field name="view\_mode">list,form</field>

</record>

<record id="action\_school\_section" model="ir.actions.act\_window">

<field name="name">Sections</field>

<field name="res\_model">school.section</field>

<field name="view\_mode">list,form</field>

</record>

<record id="action\_school\_institution" model="ir.actions.act\_window">

<field name="name">Institution Name</field>

<field name="res\_model">school.institution</field>

<field name="view\_mode">list,form</field>

</record>

</odoo>

* **school\_student\_report.xml**

<odoo>

<template id="custom\_HF\_student\_layout">

<div class="header">

<div class="row" style="report\_header\_style">

<div>

<div style="flex: 0 0 auto;">

<img src="/student\_information/static/src/img/school\_logo.png" style="height: 60px;"/>

</div>

<h1>Deffodil International School</h1>

<p style="margin: 0; padding: 0;">123 School Road, Dhaka, Bangladesh</p>

<p style="margin: 0; padding: 0;">Contact: +8801XXXXXXXXX | Email: info@deffodil.edu.bd | <strong>Session:</strong> 2024-2025</p>

</div>

</div>

</div>

<main class="article o\_report\_layout\_standard">

<t t-raw="0" />

</main>

<div class="footer o\_standard\_footer">

<div class="row" style="report\_footer\_style">

<p>@Copyrigths Page | DSL createdby Moshin Khan(odoo developer)</p>

</div>

</div>

</template>

<!-- template for the report and process the report -->

<template id="report\_school\_student\_document">

<t t-call="student\_information.custom\_HF\_student\_layout">

<t t-foreach="docs" t-as="student">

<div class="page" style="page-break-after: always; border: 1px solid #ddd; padding: 20px; margin-bottom: 20px;">

<h2 style="text-align: center;">Student Information</h2>

<div style="display: flex; gap: 20px; align-items: flex-start;">

<!-- Student Photo -->

<div style="flex: 0 0 auto;">

<t t-if="student.student\_image">

<img t-att-src="'data:image/png;base64,%s' % student.student\_image.decode('utf-8')" width="120" height="120" style="border: 1px solid #000;"/>

</t>

<t t-if="not student.student\_image">

<div style="width: 120px; height: 120px; border: 1px solid #000; display: flex; align-items: center; justify-content: center;">

<span>No Photo</span>

</div>

</t>

</div>

<!-- Student Details -->

<div style="flex: 1;">

<p><strong>Full Name:</strong> <t t-esc="student.name"/></p>

<p><strong>Roll Number:</strong> <t t-esc="student.roll\_number"/></p>

<p><strong>Class:</strong> <t t-esc="student.class\_id.name"/></p>

<p><strong>Section:</strong> <t t-esc="student.section\_id.name"/></p>

<p><strong>Institution:</strong> <t t-esc="student.institution\_id.name"/></p>

<p><strong>Age:</strong> <t t-esc="student.age"/></p>

<p><strong>Gender:</strong> <t t-esc="student.gender"/></p>

<p><strong>Email:</strong> <t t-esc="student.email"/></p>

<p><strong>Phone:</strong> <t t-esc="student.phone"/></p>

</div>

</div>

</div>

</t>

</t>

</template>

<!-- action working against the report -->

<record id="action\_report\_school\_student" model="ir.actions.report">

<field name="name">Print</field>

<field name="model">school.student</field>

<field name="report\_type">qweb-pdf</field>

<field name="report\_name">student\_information.report\_school\_student\_document</field>

<field name="report\_file">student\_information.report\_school\_student\_document</field>

<field name="binding\_model\_id" ref="model\_school\_student"/>

<field name="binding\_type">report</field>

</record>

</odoo>

* **school\_teahcer\_report.xml**

<odoo>

<template id="custom\_HF\_teacher\_layout">

<div class="header">

<div class="row" style="report\_header\_style">

<!-- Logo -->

<div>

<div style="flex: 0 0 auto;">

<img src="/student\_information/static/src/img/school\_logo.png" style="height: 60px;"/>

</div>

<h1>Deffodil International School</h1>

<p style="margin: 0; padding: 0;">123 School Road, Dhaka, Bangladesh</p>

<p style="margin: 0; padding: 0;">Contact: +8801XXXXXXXXX | Email: info@deffodil.edu.bd | <strong>Session:</strong> 2024-2025</p>

</div>

</div>

</div>

<main class="article o\_report\_layout\_standard">

<t t-out="0" />

</main>

<div class="footer o\_standard\_footer">

<div class="row">

<p>@Copyrigths Page | DSL createdby Moshin Khan(odoo developer)</p>

</div>

</div>

</template>

<!-- template for the report and process the report -->

<template id="report\_school\_teacher\_document">

<t t-call="student\_information.custom\_HF\_teacher\_layout">

<t t-foreach="docs" t-as="teacher">

<div class="page" style="page-break-after: always; border: 1px solid #ddd; padding: 20px; margin-bottom: 20px;">

<h2 style="text-align: center;">Teacher Information</h2>

<div style="display: flex; gap: 20px; align-items: flex-start;">

<!-- Teacher Photo -->

<div style="flex: 0 0 auto;">

<t t-if="teacher.teacher\_image">

<img t-att-src="'data:image/png;base64,%s' % teacher.teacher\_image.decode('utf-8')" width="120" height="120" style="border: 1px solid #000;"/>

</t>

<t t-if="not teacher.teacher\_image">

<div style="width: 120px; height: 120px; border: 1px solid #000; display: flex; align-items: center; justify-content: center;">

<span>No Photo</span>

</div>

</t>

</div>

<!-- Teacher Details -->

<div style="flex: 1;">

<p><strong>Full Name:</strong> <t t-esc="teacher.name"/></p>

<p><strong>Employee ID:</strong> <t t-esc="teacher.employee\_id"/></p>

<p><strong>Phone:</strong> <t t-esc="teacher.phone"/></p>

<p><strong>Email:</strong> <t t-esc="teacher.email"/></p>

<p><strong>Address:</strong> <t t-esc="teacher.address"/></p>

<p><strong>Hire Date:</strong> <t t-esc="teacher.hire\_date"/></p>

<p><strong>Gender:</strong> <t t-esc="teacher.gender"/></p>

</div>

</div>

</div>

</t>

</t>

</template>

<!-- action working against the report -->

<record id="action\_report\_school\_teacher" model="ir.actions.report">

<field name="name">Print</field>

<field name="model">school.teacher</field>

<field name="report\_type">qweb-pdf</field>

<field name="report\_name">student\_information.report\_school\_teacher\_document</field>

<field name="report\_file">student\_information.report\_school\_teacher\_document</field>

<field name="binding\_model\_id" ref="model\_school\_teacher"/>

<field name="binding\_type">report</field>

</record>

</odoo>

* **dashboard\_views.xml**

<odoo>

<!-- Dashboard Menu under School -->

<menuitem id="menu\_school\_dashboard" name="Dashboard" parent="school\_menu\_root" sequence="1"/>

<!-- Dashboard Client Action -->

<record id="action\_school\_dashboard" model="ir.actions.client">

<field name="name">School Dashboard</field>

<field name="tag">school\_dashboard</field>

</record>

<!-- Link Dashboard Menu to Action-->

<menuitem id="menu\_school\_dashboard\_action"

name="School Dashboard"

parent="menu\_school\_dashboard"

action="action\_school\_dashboard"

sequence="1"/>

</odoo>

**Security directory ( file name: ir.model.access.csv )**

id,name,model\_id:id,group\_id:id,perm\_read,perm\_write,perm\_create,perm\_unlink

access\_school\_student,access\_school\_student,model\_school\_student,,1,1,1,1

access\_school\_teacher,access\_school\_teacher,model\_school\_teacher,,1,1,1,1

access\_school\_class,access\_school\_class,model\_school\_class,,1,1,1,1

access\_school\_section,access\_school\_section,model\_school\_section,,1,1,1,1

access\_school\_institution,access\_school\_institution,model\_school\_institution,,1,1,1,1

**We can see many other security files here depends on our project security.**

**All the models**

* **student.py**

from odoo import models, fields, api

class Student(models.Model):

\_name = 'school.student'

\_description = 'Student Information'

name = fields.Char(string='Full Name', required=True)

roll\_number = fields.Char(string='Roll Number', required=True)

age = fields.Integer(string='Age')

gender = fields.Selection([

('male', 'Male'),

('female', 'Female'),

('other', 'Other')

], string='Gender')

date\_of\_birth = fields.Date(string='Date of Birth')

email = fields.Char(string='Email')

phone = fields.Char(string='Phone')

# joining relation operations here

class\_id = fields.Many2one('school.class', string='Class')

section\_id = fields.Many2one('school.section', string='Section')

institution\_id = fields.Many2one('school.institution', string='Institution')

address = fields.Text(string='Address')

student\_image = fields.Binary(string="Photo")

active = fields.Boolean(string='Active', default=True)

# Computed field to get total student count

total\_students = fields.Integer(string='Total Students', compute='\_compute\_total\_students')

@api.depends()

def \_compute\_total\_students(self):

# This method returns the total number of students in the database

count = self.env['school.student'].search\_count([])

for record in self:

record.total\_students = count

@api.model

def get\_student\_count(self):

return self.search\_count([])

@api.onchange('class\_id')

def \_onchange\_class\_id(self):

if self.class\_id:

self.institution\_id = self.class\_id.institution\_id

@api.onchange('section\_id')

def \_onchange\_section\_id(self):

if self.section\_id:

self.institution\_id = self.section\_id.institution\_id

* **teacher.py**

from odoo import models, fields, api

class Teacher(models.Model):

\_name = 'school.teacher'

\_description = 'Teacher Information'

name = fields.Char(string='Full Name', required=True)

employee\_id = fields.Char(string='Employee ID', required=True)

phone = fields.Char(string='Phone')

email = fields.Char(string='Email')

address = fields.Text(string='Address')

hire\_date = fields.Date(string='Hire Date')

gender = fields.Selection([

('male', 'Male'),

('female', 'Female'),

('other', 'Other')

], string='Gender')

teacher\_image = fields.Binary(string="Photo")

active = fields.Boolean(string='Active', default=True)

@api.depends()

def \_compute\_total\_teachers(self):

# This method returns the total number of teachers in the database

countTeacher = self.env['school.teacher'].search\_count([])

for record in self:

record.total\_teachers = countTeacher

@api.model

def get\_teacher\_count(self):

return self.search\_count([])

* **configuration.py**

class SchoolClass(models.Model):

\_name = 'school.class'

\_description = 'School Class'

name = fields.Char(string='Class Name', required=True)

institution\_id = fields.Many2one('school.institution', string='Institution')

class SchoolSection(models.Model):

\_name = 'school.section'

\_description = 'School Section'

name = fields.Char(string='Section Name', required=True)

institution\_id = fields.Many2one('school.institution', string='Institution')

class SchoolInstitution(models.Model):

\_name = 'school.institution'

\_description = 'School Institution'

name = fields.Char(string='Institution Name', required=True)

* **main.py ( the controller ) its with controller**

from odoo import http

from odoo.http import request

class SchoolDashboardController(http.Controller):

@http.route('/school\_dashboard/student\_count', type='json', auth='user')

def student\_count(self):

countStudent = request.env['school.student'].search\_count([])

return {'count': countStudent}

@http.route('/school\_dashboard/teacher\_count', type='json', auth='user')

def teacher\_count(self):

countTeacher = request.env['school.teacher'].search\_count([])

return {'count': countTeacher}

@http.route('/school\_dashboard/institution\_data', type='json', auth='user')

def institution\_data(self, institution\_id=None):

domain = []

if institution\_id:

domain = [('institution\_id', '=', int(institution\_id))]

student\_count = request.env['school.student'].search\_count(domain)

# Classes: unique class\_ids from students

# class\_ids = request.env['school.student'].search(domain).mapped('class\_id').filtered(lambda c: c)

# class\_count = len(class\_ids)

# Sections: unique section\_ids from students

# section\_ids = request.env['school.student'].search(domain).mapped('section\_id').filtered(lambda s: s)

# section\_count = len(section\_ids)

# working for the student, class and section count if institution selected or unselected

# when select a institution it will show the count of student class and section under the institution assigned

# if we select all institution it will show all the student assigned student class and section count

students = request.env['school.student'].search(domain)

if institution\_id:

class\_count = len(students.mapped('class\_id').filtered(lambda c: c))

section\_count = len(students.mapped('section\_id').filtered(lambda s: s))

else:

# No institution filter → show total assigned unique classes & sections

all\_students = request.env['school.student'].search([])

class\_count = len(all\_students.mapped('class\_id').filtered(lambda c: c))

section\_count = len(all\_students.mapped('section\_id').filtered(lambda s: s))

return {

'student\_count': student\_count,

'class\_count': class\_count,

'section\_count': section\_count,

}

@http.route('/school\_dashboard/institutions', type='json', auth='user')

def get\_institutions(self):

institutions = request.env['school.institution'].search([])

return {

'institutions': [{'id': inst.id, 'name': inst.name} for inst in institutions]

}

**Javascript file**

* **school\_dashboard.js**

/\*\* @odoo-module \*\*/

import { registry } from "@web/core/registry";

import { Component, useState, onWillStart } from "@odoo/owl";

import { rpc } from "@web/core/network/rpc";

class SchoolDashboard extends Component {

setup() {

this.state = useState({ studentCount: 0,

teacherCount: 0,

institutions: [],

selectedInstitution: 0,

studentCount: 0,

classCount: 0,

sectionCount: 0});

onWillStart(async () => {

const result1 = await rpc("/school\_dashboard/student\_count", {});

const result2 = await rpc("/school\_dashboard/teacher\_count", {});

const institutionsResult = await rpc("/school\_dashboard/institutions", {});

this.state.studentCount = result1.count;

this.state.teacherCount = result2.count;

this.state.institutions = institutionsResult.institutions;

});

}

async loadData() {

const data = await rpc("/school\_dashboard/institution\_data", {

institution\_id: this.state.selectedInstitution || null,

});

this.state.studentCount = data.student\_count;

this.state.classCount = data.class\_count;

this.state.sectionCount = data.section\_count;

}

async onInstitutionChange(ev) {

this.state.selectedInstitution = parseInt(ev.target.value);

await this.loadData();

}

}

SchoolDashboard.template = "DashboardTemplate";

registry.category("actions").add("school\_dashboard", SchoolDashboard);

**Template file**

* **school\_dashboard\_templates.xml**

<template id="DashboardTemplate" name="School Dashboard">

<t t-name="DashboardTemplate">

<div class="o\_container" style="max-width: 800px; margin: 0 auto; padding: 2em; font-family: Arial, sans-serif;">

<h1 style="font-size: 2em; margin-bottom: 1em; color: #2c3e50; text-align: center;">

📊 School Dashboard

</h1>

<div style="margin-bottom: 1.5em;">

<label style="font-weight: bold; margin-right: 0.5em;">

🎓 Select Institution:

</label>

<select t-on-change="onInstitutionChange"

style="padding: 0.5em 1em; border: 1px solid #ccc; border-radius: 4px;">

<option t-att-value="0">-- All Institutions --</option>

<t t-foreach="state.institutions" t-as="inst" t-key="inst.id">

<option t-att-value="inst.id">

<t t-esc="inst.name"/>

</option>

</t>

</select>

</div>

<div style="display: flex; gap: 1em;">

<div style="flex: 1; padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #2980b9;">

<t t-esc="state.studentCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

👩‍🎓 Total Students

</div>

</div>

<div style="flex: 1; padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #27ae60;">

<t t-esc="state.classCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

🏫 Total Classes

</div>

</div>

<div style="flex: 1; padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #8e44ad;">

<t t-esc="state.sectionCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

📚 Total Sections

</div>

</div>

</div>

</div>

</t>

</template>

**Now here the backend and frontend connection for beginners:**

dashboard\_view:

<odoo>

<!-- Dashboard Menu under School -->

<menuitem id="menu\_school\_dashboard" name="Dashboard" parent="school\_menu\_root" sequence="1"/>

<!-- Dashboard Client Action -->

<record id="action\_school\_dashboard" model="ir.actions.client">

<field name="name">School Dashboard</field>

<field name="tag">school\_dashboard</field>

</record>

<!-- Link Dashboard Menu to Action -->

<menuitem id="menu\_school\_dashboard\_action"

name="School Dashboard"

parent="menu\_school\_dashboard"

action="action\_school\_dashboard"

sequence="1"/>

</odoo>

static/src/xml/template\_views:

<template id="DashboardTemplate" name="School Dashboard">

<t t-name="DashboardTemplate">

<div style="padding:2em;">

<h1>Hello World!</h1>

</div>

</t>

</template>

static/src/js:

/\*\* @odoo-module \*\*/

import { registry } from "@web/core/registry";

import { Component } from "@odoo/owl";

class SchoolDashboard extends Component {}

SchoolDashboard.template = "DashboardTemplate";

registry.category("actions").add("school\_dashboard", SchoolDashboard);

Edit the manifest

'data': [

<--add the view file-->

'views/dashboard\_views.xml',

],

'assets': {

<--add the template file and js file-->

'web.assets\_backend': [

'student\_information/static/src/js/school\_dashboard.js',

'student\_information/static/src/xml/school\_dashboard\_templates.xml'

],

* **main.py its without using controller**

* **Model file →custom\_dashboard.py**

from odoo import api, fields, models

class SchoolDashboardData(models.Model):

\_name = 'school.dashboard.data'

\_description = 'Dashboard Data'

@api.model

def get\_dashboard\_counts(self, institution\_id=None, \*\*kwargs):

counts = {

'student\_count': 0,

'teacher\_count': 0,

'class\_count': 0,

'section\_count': 0,

}

if institution\_id:

domain = [('institution\_id', '=', institution\_id)]

counts['student\_count'] = self.env['school.student'].search\_count(domain)

counts['teacher\_count'] = self.env['school.teacher'].search\_count(domain)

counts['class\_count'] = self.env['school.class'].search\_count(domain)

counts['section\_count'] = self.env['school.section'].search\_count(domain)

return counts

@api.model

def get\_institutions(self, \*\*kwargs):

institutions = self.env['school.institution'].search([])

return [{'id': inst.id, 'name': inst.name} for inst in institutions]

* **Custom\_dashboard.js the js file**

import { registry } from "@web/core/registry";

import { Component, useState, onWillStart } from "@odoo/owl";

import { rpc } from "@web/core/network/rpc";

class CustomDashboard extends Component {

setup() {

this.state = useState({

institutions: [],

selectedInstitution: null,

studentCount: 0,

teacherCount: 0,

classCount: 0,

sectionCount: 0,});

onWillStart(async () => {

// Load institutions

this.state.institutions = await rpc("/web/dataset/call\_kw", {

model: "school.dashboard.data",

method: "get\_institutions",

args: [],

kwargs: {},});});

}

async onInstitutionChange(ev) {

const institutionId = parseInt(ev.target.value);

this.state.selectedInstitution = institutionId || null;

const counts = await rpc("/web/dataset/call\_kw", {

model: "school.dashboard.data",

method: "get\_dashboard\_counts",

args: [],

kwargs: { institution\_id: institutionId },

});

this.state.studentCount = counts.student\_count;

this.state.teacherCount = counts.teacher\_count;

this.state.classCount = counts.class\_count;

this.state.sectionCount = counts.section\_count;

}

}

CustomDashboard.template = "CustomDashboardTemplate";

CustomDashboard.props = {};

registry.category("actions").add("custom\_dashboard", CustomDashboard);

* **Custom\_dashboard\_template.xml template fils**

<templates id="template" xml:space="preserve">

<t t-name="CustomDashboardTemplate">

<div class="o\_container" style="max-width: 800px; margin: 0 auto; padding: 2em; font-family: Arial, sans-serif;">

<h1 style="font-size: 2em; margin-bottom: 1em; color: #2c3e50; text-align: center;">

📊 School Dashboard

</h1>

<div style="margin-bottom: 1.5em;">

<label style="font-weight: bold; margin-right: 0.5em;">

🎓 Select Institution:

</label>

<select t-on-change="onInstitutionChange"

style="padding: 0.5em 1em; border: 1px solid #ccc; border-radius: 4px;">

<option value="">-- Select Institution --</option>

<t t-foreach="state.institutions" t-as="inst" t-key="inst.id">

<option t-att-value="inst.id">

<t t-esc="inst.name"/>

</option>

</t>

</select>

</div>

<div style="display: grid; grid-template-columns: repeat(auto-fit, minmax(160px, 1fr)); gap: 1em;">

<!-- Students -->

<div style="padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #2980b9;">

<t t-esc="state.studentCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

👨‍🎓 Total Students

</div>

</div>

<!-- Teachers -->

<div style="padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #c0392b;">

<t t-esc="state.teacherCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

👩‍🏫 Total Teachers

</div>

</div>

<!-- Classes -->

<div style="padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #27ae60;">

<t t-esc="state.classCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

🏫 Total Classes

</div>

</div>

<!-- Sections -->

<div style="padding: 1.5em; background: #f9f9f9; border-radius: 8px; box-shadow: 0 1px 3px rgba(0,0,0,0.1); text-align: center;">

<div style="font-size: 2em; color: #8e44ad;">

<t t-esc="state.sectionCount"/>

</div>

<div style="margin-top: 0.5em; color: #555;">

📚 Total Sections

</div>

</div>

</div>

</div>

</t>

</templates>

* **The menu view for the custom\_dashboard.xml**

<odoo>

<!-- Dashboard Menu -->

<menuitem id="menu\_custom\_dashboard" name="Custom\_Dashboard" parent="school\_menu\_root" sequence="5"/>

<!-- Dashboard Client Action -->

<record id="action\_custom\_dashboard" model="ir.actions.client">

<field name="name">Custom Dashboard</field>

<field name="tag">custom\_dashboard</field>

</record>

<!-- Link Menu to Action -->

<menuitem id="menu\_custom\_dashboard\_action"

name="Custom Dashboard"

parent="menu\_custom\_dashboard"

action="action\_custom\_dashboard"

sequence="1"/>

</odoo>