

https://uts74-dev-ed.develop.my.salesforce.com/setup/forcecomHomepage.apexp?setupid=ForceCom
Username: zheng.wangforsalesf@gmail.com
Password: 2677260Sm\$\$

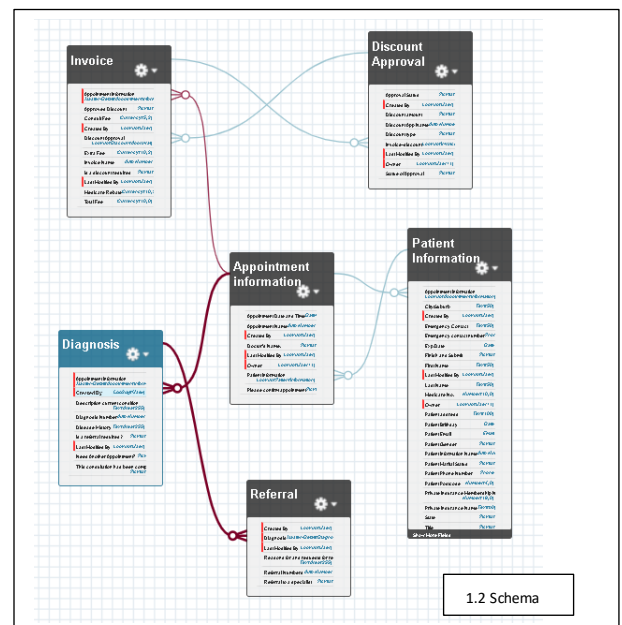
This project plans to design an application on force.com for individual clinics for a group that operates several small clinics. This small system consists of three modules: appointment, diagnosis and billing. Each module is implemented by 1-2 objects, including patient information, appointments, diagnosis, referrals, invoices and discount approvals. This small system implementation demonstrated that the benefits of PAAS in practice include low cost (no system development and hardware deployment required), usability and scalability (new modules can be added at any time to meet demand).

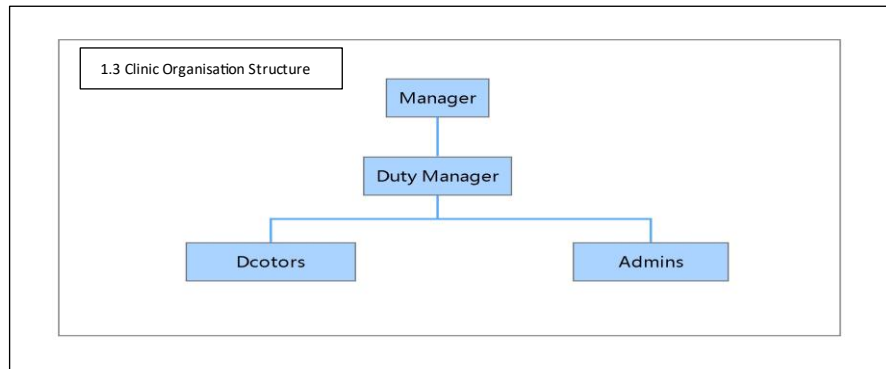
Clinic A is a small clinic in Sydney operated by a large clinic operating group. The clinic mainly provides GP consultation, treatment, and referral services. The business process involves the patient registering and entering their personal details, booking an appointment, and making a diagnosis or referral with doctors. At the end of the consultation, an invoice is issued to the patient, and a discount is given depending on the patient's circumstances. As it is one of the small clinics operated by the group, the clinic does not need to be equipped with finance and HR but is managed by the group. The clinic's daily staff (system users) are admins, doctors, and managers.

Doctors provide consultation and diagnosis based on appointments and make referrals for patients who need them.

Duty Managers are the on-site managers of the clinic and are responsible for the day-to-day management of the clinic, reviewing information, and approving discounts.

Managers are group administrators and are responsible for the management of several clinics. They have the highest authority over the clinics and are responsible for approving 100% discounts.





2 System Modelling Section:

a) Data Model for the PaaS Application

The data model is relatively simple as this small practice only has GP consultation, diagnosis and referral services. As shown in Figure 1.2, the patient's personal information is entered into the system. Necessary information is collected to ensure future services. In the patient's personal information, the patient's birthday and medicare number are verified by setting validation rules to ensure the correct data. Patient information is connected to the appointment information through lookup-relationship. It allows the patient's appointment history to be looked up in the patient information.

Patient Information Validation Rule
[Back to Patient Information](#)

Validation Rule Detail		Edit	Clone
Rule Name	Medicare_Exp_Date_Rule		
Error Condition Formula	Exp_Date__c <= TODAY()		
Error Message	Your card has expired.		
Description			
Created By	Zheng Wang, 9/10/2023, 8:52 am	Edit	Clone

Patient Information Validation Rule
[Back to Patient Information](#)

Validation Rule Detail		Edit	Clone
Rule Name	patient_date_birth_rule		
Error Condition Formula	Patient_Birthday__c >= TODAY()		
Error Message	Please enter your correct birthday.		
Description			
Created By	Zheng Wang, 9/10/2023, 8:27 am	Edit	Clone

Patient Information
 P-00001
[Back to List: Profiles](#)

[Open Activities \(0\)](#) | [Activity History \(0\)](#) | [Appointment Information \(0\)](#)

Patient Information Detail Edit Delete Clone Sharing

▼ Patient Information

Title	Mr	Patient Gender	Male
First Name	Zheng	Patient Birthday	13/10/2009
Last Name	Wang	Patient Marital Status	married

▼ Patient Address

Patient address	18 Russell St	State	NSW
City/Suburb	Vaucluse	Patient Postcode	

▼ Contact Details

Patient Phone Number	041506887	Patient Email	zheng.wang0911@gmail.com
Emergency Contact	Ying	Emergency contact number	0487999381

▼ Medicare And Insurance

Medicare No.	1,234,456,789	Exp.Date	9/10/2042
Private Insurance Name	medibank	Private Insurance Membership Number	123,456,789

▼ Finish and Submit

Finish and Submit

▼ Appointment Information

Appointment Information	AP-00001	Owner	Zheng Wang (Change)
Patient Information Name	P-00001	Last Modified By	Zheng Wang, 9/10/2023, 9:08 am
Created By	Zheng Wang, 9/10/2023, 9:08 am		

Edit Delete Clone Sharing

The Appointment Information module allows you to select a doctor and an appointment time and get patient information through lookup relationships. Finally, all information must be selected through a checklist to confirm the appointment. A validation rule verifies the appointment time, and the appointment time must be after the registration of the appointment. After completing all workflows,

appointment Information displays completed invoice and diagnosis information through the Master-Detail Relationship.

Appointment information Validation Rule

[Back to Appointment information](#)

Validation Rule Detail

Appointment_Validation_Rule

Active

✓

Error Condition Formula

Appointment_Date_and_Time__c >= NOW()

Error Message

Please enter the correct appointment time.

Error Location

Top of Page

Description

Appointment Information Validation Rule

Created By

Zheng Wang, 9/10/2023, 8:34 am

Modified By

Zheng Wang, 22/10/2023, 8:24 pm

Edit

Clone

Appointment information

AP-00001

[Back to List: Custom Object Definitions](#)

[Open Activities \(0\)](#) | [Activity History \(0\)](#) | [Patient Information \(1\)](#) | [Invoice \(1\)](#) | [Diagnosis \(1\)](#)

Appointment information Detail

Edit

Delete

Clone

Sharing

Appointment

Doctor's Name

Allen Brown

Appointment Date and Time

7/12/2023, 12:00 pm

Patient Information

P-00001

confirmation

Please confirm appointment

Yes, confirmed.

Appointment Name

AP-00001

Owner

Zheng Wang (Chanel)

Created By

Zheng Wang, 9/10/2023, 9:08 am

Last Modified By

Zheng Wang, 22/10/2023, 7:53 pm

Edit

Delete

Clone

Sharing

Open Activities

New Task

New Event

No records to display

Activity History

Log a Call

Mail Merge

Send an Email

No records to display

Patient Information

New Patient Information

Action

Patient Information Name

Edit

Del

P-00001

Invoice

New Invoice

Action

Invoice Name

Edit

Del

Invoice-0000001

Diagnosis

New Diagnosis

Action

Diagnosis Number

Edit

Del

DIA-0000001

The referral module will be accessed if a referral is required at the end of the GP consultation and diagnosis. The referral module requires the doctor to select a specialist and fill in the reason and referral request. In the referral module, all the information about the previous diagnosis can be reviewed directly through the Master-Detail relationship.

Referral

Ref-000001

[Back to List: Custom Object Definitions](#)

[Open Activities \(0\)](#) | [Activity History \(0\)](#)

Referral Detail

Save

Cancel

Referral Numbers

Ref-000001

Referral to a specialist

Dr. Sarah Smith (Cardiologist)

Reasons for and requests for referrals

for

Diagnosis

DIA-000001

Created By

Zheng Wang, 22/10/2023, 7:41 pm

Last Modified By

Zheng Wang, 22/10/2023, 7:41 p

Save

Cancel

After the diagnosis and consultation are completed, the invoice object obtains the information about the appointment according to the Master-Detail relationship. It fills in the relevant information by the Admin team, and the invoice object selects whether it is necessary to apply for a discount and obtains the information about the post-discount approval from the Discount Approval object. The amount in the invoice object is validated according to the validation rules to ensure the data is correct.

Invoice

Invoice-000001

[Back to List](#)
[Custom Object Definitions](#)

[Open Activities \(0\)](#)
[Activity History \(0\)](#)
[Discounts Approval \(1\)](#)

Invoice Detail

▼ Fees

Consult Fee	\$130.00	Extra Fee	\$20.00
Is a discount required		Yes	

▼ Medicare Rebate

Medicare Rebate	\$80.00
-----------------	---------

▼ Discount

Approved Discount	\$20	Discount Approval	Dis-000001
-------------------	------	-------------------	------------

▼ Total Fee Paid By Patient

Total Fee	\$30
Invoice Name	Invoice-000001
Appointment information	AP-000001
Created By	Zheng Wang, 9/10/2023, 9:14 pm
Last Modified By	Zheng Wang, 22/10/2023, 9:12 pm

Open Activities

New Task

New Event

No records to display

Activity History

Log a Call

Mail Merge

Send an Email

No records to display

Discounts Approval

New Discount Approval

Action

Discount App Name

Edit

Del

Dis-000001

Invoice Validation Rule

[Back to Invoice](#)

Validation Rule Detail

Edit

Close

Rule Name	Fee_Rule_Consult	Action	✓
Error Condition Formula	Consult_Fee_c <= 0	Error Location	Consult Fee
Error Message	Please enter the correct amount.		
Description			
Created By	Zheng Wang, 9/10/2023, 8:39 am	Modified By	Zheng Wang, 22/10/2023, 9:42 pm

Edit

Close

Invoice Validation Rule

[Back to Invoice](#)

Validation Rule Detail

Edit

Close

Rule Name	Fee_Rule_Extra	Action	✓
Error Condition Formula	Extra_Fee_c > 0	Error Location	Top of Page
Error Message	Please enter the correct amount.		
Description			
Created By	Zheng Wang, 9/10/2023, 8:40 am	Modified By	Zheng Wang, 22/10/2023, 9:43 pm

Edit

Close

Invoice Validation Rule

[Back to Invoice](#)

Validation Rule Detail

Edit

Close

Rule Name	Fee_Rule_Medicare_Rebate	Action	✓
Error Condition Formula	Medicare_Rebate_c > (Consult_Fee_c + Extra_Fee_c) && Medicare_Rebate_c < 0	Error Location	Top of Page
Error Message	Please enter the correct amount.		
Description			
Created By	Zheng Wang, 9/10/2023, 8:42 am	Modified By	Zheng Wang, 22/10/2023, 10:03 p

Edit

Close

Invoice Validation Rule

[Back to Invoice](#)

Validation Rule Detail

Edit

Close

Rule Name	Total_Fee	Action	✓
Error Condition Formula	Total_c > (Consult_Fee_c + Extra_Fee_c + Medicare_Rebate_c)	Error Location	Top of Page
Error Message	Total Fee can be negative.		
Description			
Created By	Zheng Wang, 22/10/2023, 9:43 pm	Modified By	Zheng Wang, 22/10/2023, 9:50 pm

Edit

Close

The Discount Approval object approves modules for discounts. Approving discounts is the responsibility of the Manager team. All discounts can be approved by the manager on duty, except for Totally Free, which requires manager approval. Discount types are differentiated by concession card, senior card, student card and others, and discounts range from \$10 to free.

Discount Approval

Dis-000001

[Back to List](#)
[Workflow Rules](#)

[Open Activities \(0\)](#)
[Activity History \(0\)](#)
[Approval History \(0\)](#)
[Invoice \(1\)](#)

Discount Approval Detail

Save

Cancel

▼ Discount

Discount type	Concession card
Discount amount	\$20
Invoice-discount	Invoice-000001

▼ Statue

Approval Status	Approved
Statue of Approval	Finish
Discount App No.	Dis-000001

▼ Information

Created By	Zheng Wang, 22/10/2023, 9:10 pm
Owner	Zheng Wang [Change]
Last Modified By	Zheng Wang, 22/10/2023, 9:10 pm

Save

Cancel

The discount approval process is divided into two steps. When there is a discount amount, but it does not reach 100% free, it is approved by the manager on duty, and after approval, the task is assigned to the Admin team and the related field is updated. If the discount is free, it requires manager approval. After approval, the task will also be assigned to the Admin team, and the relevant field will be updated.

Approval Steps

New Approval Step

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior																								
Hide Actions Edit Del	1	Approval from Manager	(Discount Approval: Discount amount NOT EQUAL TO 0) AND (Discount Approval: Discount amount NOT EQUAL TO Free), else Approve	User:Zhao Wang	Final Rejection																									
<div><div>Approval Actions</div><div><div>Add Existing</div><div>Add New</div></div><table><thead><tr><th>Action</th><th>Type</th><th>Description</th></tr></thead><tbody><tr><td>Edit Remove</td><td>Task</td><td>Discount approved</td></tr><tr><td>Edit Remove</td><td>Field Update</td><td>Discount approved</td></tr></tbody></table></div> <div><div>Rejection Actions</div><div><div>Add Existing</div><div>Add New</div></div><table><thead><tr><th>Action</th><th>Type</th><th>Description</th></tr></thead><tbody><tr><td>Edit Remove</td><td>Task</td><td>Discounts not approved</td></tr><tr><td>Edit Remove</td><td>Field Update</td><td>Discounts not approved</td></tr></tbody></table></div>							Action	Type	Description	Edit Remove	Task	Discount approved	Edit Remove	Field Update	Discount approved	Action	Type	Description	Edit Remove	Task	Discounts not approved	Edit Remove	Field Update	Discounts not approved	2	100%Discount approval	Discount Approval: Discount amount EQUALS Free	User:Zhao Wang	Final Rejection	
Action	Type	Description																												
Edit Remove	Task	Discount approved																												
Edit Remove	Field Update	Discount approved																												
Action	Type	Description																												
Edit Remove	Task	Discounts not approved																												
Edit Remove	Field Update	Discounts not approved																												
<div><div>Approval Actions</div><div><div>Add Existing</div><div>Add New</div></div><table><thead><tr><th>Action</th><th>Type</th><th>Description</th></tr></thead><tbody><tr><td>Edit Remove</td><td>Task</td><td>Discount finalized and approved</td></tr><tr><td>Edit Remove</td><td>Field Update</td><td>Discount approved</td></tr><tr><td>Edit Remove</td><td>Field Update</td><td>Final approval</td></tr></tbody></table></div> <div><div>Rejection Actions</div><div><div>Add Existing</div><div>Add New</div></div><table><thead><tr><th>Action</th><th>Type</th><th>Description</th></tr></thead><tbody><tr><td>Edit Remove</td><td>Field Update</td><td>Discounts not approved</td></tr><tr><td>Edit Remove</td><td>Field Update</td><td>Final not approval</td></tr><tr><td>Edit Remove</td><td>Task</td><td>Final Discount not Approval</td></tr></tbody></table></div>							Action	Type	Description	Edit Remove	Task	Discount finalized and approved	Edit Remove	Field Update	Discount approved	Edit Remove	Field Update	Final approval	Action	Type	Description	Edit Remove	Field Update	Discounts not approved	Edit Remove	Field Update	Final not approval	Edit Remove	Task	Final Discount not Approval
Action	Type	Description																												
Edit Remove	Task	Discount finalized and approved																												
Edit Remove	Field Update	Discount approved																												
Edit Remove	Field Update	Final approval																												
Action	Type	Description																												
Edit Remove	Field Update	Discounts not approved																												
Edit Remove	Field Update	Final not approval																												
Edit Remove	Task	Final Discount not Approval																												

b) Custom User Profile/s with descriptions of each profile

As previously stated, this system has four users. Manager, Duty Manager, Admin, and Doctor. Being a system used by a small clinic, all tabs appear on each user's page and are not hidden for easy access to information.

Manager

Edit | Del | Assign

Add Role

Duty Manager

Edit | Del | Assign

Add Role

Administration

Edit | Del | Assign

Add Role

Doctor

Edit | Del | Assign

Add Role

The admin team is responsible for patient information, patient appointments and invoices and reading discount approvals.

Custom Object Permissions

	Basic Access					Data Administration			Basic Access					Data Administration	
	Read	Create	Edit	Delete	View All	Modify All	Read		Create	Edit	Delete	View All	Modify All		
Appointment Information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Invoice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Diagnose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Patient Information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Discount Approval	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Referrals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Session Settings

Session Times Out After2 hours of inactivity

Session Security Level Required at Login

Password Policies

User passwords expire in	One year
Enforce password history	3 passwords remembered
Minimum password length	8
Password complexity requirement	Must include alpha and numeric characters
Password question requirement	Cannot contain password
Maximum invalid login attempts	10
Lockout effective period	15 minutes
Obscure secret answer for password resets	<input type="checkbox"/>
Require a minimum 5 day password lifetime	<input type="checkbox"/>
Don't immediately expire links to forgot password email	<input type="checkbox"/>

Edit

Close

Delete

View Others

The doctor team is responsible for diagnosing and referring objects and needs to read patient information and appointment information. The doctor needs to create the next appointment for the patient if needed.

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointment information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnosis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discounts Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Invoice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Referrals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Session Settings

Session Times Out After: 2 hours of inactivity

Session Security Level Required at Login: _____

Password Policies

User passwords expire in: One year

Enforce password history: 3 passwords remembered

Minimum password length: 8

Password complexity requirement: Must include alpha and numeric characters

Password question requirement: Cannot contain password

Maximum invalid login attempts: 10

Lockout effective period: 15 minutes

Obscure secret answer for password resets: ☐

Require a minimum 1 day password lifetime: ☐

Don't immediately expire links in forgot password emails: ☐

[Edit](#) [Close](#) [Delete](#) [View Users](#)

The Duty Manager is responsible for the clinic's day-to-day running, needs to have read-only access to all information, and can complete all tasks except diagnosis and referrals.

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointment information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Diagnosis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discounts Approval	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Invoice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Patient information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Referrals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Session Settings

Session Times Out After: 2 hours of inactivity

Session Security Level Required at Login: _____

Password Policies

User passwords expire in: One year

Enforce password history: 3 passwords remembered

Minimum password length: 8

Password complexity requirement: Must include alpha and numeric characters

Password question requirement: Cannot contain password

Maximum invalid login attempts: 10

Lockout effective period: 15 minutes

Obscure secret answer for password resets: ☐

Require a minimum 1 day password lifetime: ☐

Don't immediately expire links in forgot password emails: ☐

[Edit](#) [Close](#) [Delete](#) [View Users](#)

The manager has the highest level of access to the clinic and can read, create, edit, and delete information except for diagnoses and referrals.

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointment information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Diagnosis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discounts Approval	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Custom Object Permissions						
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Invoice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Patient information	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Referrals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Session Settings

Session Times Out After:

Session Security Level Required at Login:

Password Policies

User passwords expire in:

Enforce password history:

Minimum password length:

Password complexity requirement:

Password question requirement:

Maximum invalid login attempts:

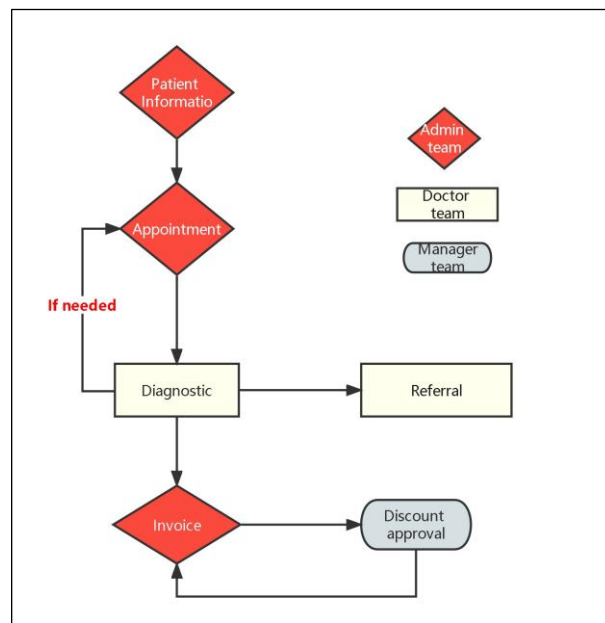
Lockout effective period:

Obscure secret answer for password resets: ☐

Require a minimum 1 day password lifetime: ☐

Don't immediately expire links in forgot password emails: ☐

c) The workflow diagrams



When new patient information is entered, the system automatically sends a work target to the Admin team, requesting team members to review the new patient information. An email is sent to the patient using the email address in the patient's information to confirm that the information has been uploaded into the system.

Workflow Rule Detail

EditDeleteCloneActivate

Rule Name	New Patient Information	Object	Patient Information
Active	<input type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and any time it's edited to subsequently meet criteria
Description	New Patient Information submit		
Rule Criteria	Patient Information: Finish and Submit EQUALS Yes		
Created By	Zhang Wang, 9/10/2023, 11:19 pm	Modified By	Zhang Wang, 23/10/2023, 12:15 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	New Patient Information
Email Alert	New patient information has been submitted.

Time-Dependent Workflow Actions

See an example

🕒 1 Hour After Patient Information: Created Date	
Type	Description
Task	New Patient Information

Workflow Rule Detail

EditDeleteCloneActivate

Rule Name	New Patient Information	Object	Patient Information
Active	<input type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and any time it's edited to subsequently meet criteria
Description	New Patient Information submit		
Rule Criteria	Patient Information: Finish and Submit EQUALS Yes		
Created By	Zhang Wang, 9/10/2023, 11:19 pm	Modified By	Zhang Wang, 23/10/2023, 12:15 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	New Patient Information
Email Alert	New patient information has been submitted.

Time-Dependent Workflow Actions

See an example

🕒 1 Hour After Patient Information: Created Date	
Type	Description
Task	New Patient Information

Test Email Template

New Patient Information

[Back to List: Email Templates](#)

Preview your email template below.

Email Template Detail

EditDeleteClone

Email Templates from Salesforce	Unfiled Public Classic Email Templates		
Email Template Name	New Patient Information	Available For Use	<input checked="" type="checkbox"/>
Template Unique Name	New_Patient_Information	Last Used Date	
Encoding	Unicode (UTF-8)	Times Used	
Author	Zhang Wang (Change)		
Description			
Created By	Zhang Wang, 10/10/2023, 12:40 am	Modified By	Zhang Wang, 23/10/2023, 12:26 am

Email Template

Send Test and Verify Merge Fields

Subject

Your information has been successfully submitted.

Plain Text Preview

Dear Clinic Customer,

I hope you and your family are doing well. We greatly appreciate your continued support and trust in our clinic.

We are happy to let you know that we have successfully uploaded the information of new customers into our system. This means you can now conveniently schedule your medical appointments using various methods, including our website, mobile app, phone, or email.

Thank you!

Best wishes.

Duty Manager team

When a patient appointment is created, the system assigns the task to the Admin team and Doctors, respectively. The system will directly inform the new appointment that is created.

Workflow Rule Detail

EditDeleteCloneActivate

Rule Name	Appointment confirmed	Object	Appointment information
Active	<input type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and any time it's edited to subsequently meet criteria
Description	When an appointment confirmed		
Rule Criteria	Appointment information: Please confirm appointment EQUALS "Yes, confirmed"		
Created By	Zheng Wang, 10/10/2023, 1:01 am	Modified By	Zheng Wang, 10/10/2023, 1:01 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	New appointment confirmed
Task	New appointments have been created

Time Dependent Workflow Actions [See an example](#)

Task

New appointment confirmed

[Printable View](#) | [Help for this Page](#)

[Back to List: Workflow Rules](#)

[Rules Using This Task \(1\)](#) | [Approval Processes Using This Task \(0\)](#) | [Entitlement Processes Using This Task \(0\)](#)

Workflow Task Detail

EditDeleteClone

Object	Appointment information	Status	In Progress
Assigned To	Role: Administration	Priority	High
Subject	New appointment confirmed		
Unique Name	New_appointment_confirmed		
Due Date	Rule Trigger Date		
Comments	A new appointment has been confirmed in the system.		
Created By	Zheng Wang, 10/10/2023, 1:04 am	Modified By	Zheng Wang, 10/10/2023, 1:04 am

EditDeleteClone

Rules Using This Task

[Rules Using This Task Help](#)

Action	Rule Name	Description	Object	Active
Edit Del Activate	Appointment confirmed	When an appointment confirmed	Appointment information	<input type="checkbox"/>

Task

New appointments have been created

[Printable View](#) | [Help for this Page](#)

[Back to List: Workflow Rules](#)

[Rules Using This Task \(1\)](#) | [Approval Processes Using This Task \(0\)](#) | [Entitlement Processes Using This Task \(0\)](#)

Workflow Task Detail

EditDeleteClone

Object	Appointment information	Status	In Progress
Assigned To	Role: Doctor	Priority	High
Subject	New appointments have been created		
Unique Name	New_appointments_have_been_created		
Due Date	Rule Trigger Date		
Comments	A new appointment has been created in the system.		
Created By	Zheng Wang, 10/10/2023, 1:06 am	Modified By	Zheng Wang, 23/10/2023, 8:19 am

EditDeleteClone

Rules Using This Task

[Rules Using This Task Help](#)

Action	Rule Name	Description	Object	Active
Edit Del Activate	Appointment confirmed	When an appointment confirmed	Appointment information	<input type="checkbox"/>

If a patient needs to create a new appointment after the diagnosis is completed, the system automatically assigns a task to the admin team after the physician selects "Need New Appointment". The task will require the admin team to assist the patient in completing the new appointment.

Workflow Rule Detail

EditDeleteCloneActivate

Rule Name	Diagnosis-New Appointment	Object	Diagnosis
Active	<input type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and any time it's edited to subsequently meet criteria
Description	When patients need to make an appointment for their next consultation.		
Rule Criteria	Diagnosis: Need Another Appointment? EQUALS YES		
Created By	Zheng Wang, 10/10/2023, 1:38 am	Modified By	Zheng Wang, 23/10/2023, 8:37 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	Assist customers with new appointments

Task

Assist customers with new appointments

[Back to List: Workflow Rules](#)

[Rules Using This Task \(1\)](#) | [Approval Processes Using This Task \(0\)](#) | [Entitlement Processes Using This Task \(0\)](#)

Workflow Task Detail

EditDeleteClone

Object	Diagnosis	Status	In Progress
Assigned To	Role: Administration	Priority	High
Subject	Assist customers with new appointments		
Unique Name	Assist_customers_with_new_appointments		
Due Date	Rule Trigger Date		
Comments	This customer needs to confirm their next appointment before leaving. Please assist in completing the appointment.		
Created By	Zheng Wang, 10/10/2023, 1:44 am	Modified By	Zheng Wang, 10/10/2023, 1:44 am

EditDeleteClone

After the doctor selects "yes" for the Referral Needed option in the Diagnostics module, the task will be assigned to the Information Owner, prompting the need to complete the referral record.

Workflow Rule

Diagnosis-referral

[Back to List: Workflow Rules](#)

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Workflow Rule Detail

EditDeleteCloneActivate

Rule Name	Diagnosis-referral	Object	Diagnosis
Active	<input type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and any time it's edited to subsequently meet criteria
Description	When a patient needs to be referred.		
Rule Criteria	Diagnosis: Is a referral required? EQUALS Yes		
Created By	Zheng Wang, 10/10/2023, 1:20 am	Modified By	Zheng Wang, 11/10/2023, 9:52 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	New referral needs have been created

Task

New referral needs have been created

[Back to List: Workflow Rules](#)

[Rules Using This Task \(1\)](#) | [Approval Processes Using This Task \(0\)](#) | [Entitlement Processes Using This Task \(0\)](#)

Workflow Task Detail

EditDeleteClone

Object	Diagnosis	Status	In Progress
Assigned To	Appointment Information Owner	Priority	High
Subject	New referral needs have been created		
Unique Name	New_referral_needs_have_been_created		
Due Date	Rule Trigger Date		
Comments	Please complete the referral record.		
Created By	Zheng Wang, 10/10/2023, 1:29 am	Modified By	Zheng Wang, 23/10/2023, 8:44 am

EditDeleteClone

Rules Using This Task

Rules Using This Task Help

Action	Rule Name	Description	Object	Active
Edit Del Activate	Diagnosis-referral	When a patient needs to be referred.	Diagnosis	<input type="checkbox"/>

As the physician chooses to complete the current diagnosis, requesting an invoice to be issued to the patient is assigned to the admin team.

Workflow Rule Detail

EditCloneDeactivate

Rule Name	Diagnosis-invoice	Object	Diagnosis
Active	<input checked="" type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created
Description			
Rule Criteria	Diagnosis: This consultation has been completed EQUALS Yes		
Created By	Zheng Wang, 10/10/2023, 1:32 am	Modified By	Zheng Wang, 23/10/2023, 8:53 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	Diagnosis-Invoice

Task

Diagnosis-Invoice

[Back to List: Workflow Rules](#)

Rules Using This Task (1) | Approval Processes Using This Task (0) | Enrollment Processes Using This Task (0)

Workflow Task Detail

EditDeleteClone

Object	Diagnosis	Status	In Progress
Assigned To	Role: Administration	Priority	High
Subject	Diagnosis-Invoice		
Unique Name	Diagnosis_Invoice		
Due Date	Rule Trigger Date		
Comments	This consultation has been completed, please generate an invoice and complete payment before the customer leaves.		
Created By	Zheng Wang, 10/10/2023, 1:37 am	Modified By	Zheng Wang, 10/10/2023, 7:36 pm

EditDeleteClone

Rules Using This Task

Rules Using This Task Help ?

Action	Rule Name	Description	Object	Active
Edit Del Deactivate	Diagnosis-Invoice		Diagnosis	<input checked="" type="checkbox"/>

Approval Processes Using This Task

Approval Processes Using This Task Help ?

This task is currently not used by any approval processes

When a discount is selected as required in the invoice module, the system assigns two tasks directly to the Duty Manager, reminding the Duty Manager to complete the Discount Approval module for completion and review. At the same time, an email will be sent to the Duty Manager and the Manager, alerting them that a new discount request needs to be reviewed.

Workflow Rule Detail

EditCloneDeactivate

Rule Name	Invoice-DiscountApproval	Object	Invoice
Active	<input checked="" type="checkbox"/>	Evaluation Criteria	Evaluate the rule when a record is created, and anytime it's edited to subsequently meet criteria
Description	When a discount request is created.		
Rule Criteria	Invoice: Is a discount required EQUALS Yes		
Created By	Zheng Wang, 10/10/2023, 9:09 pm	Modified By	Zheng Wang, 23/10/2023, 8:55 am

Workflow Actions

Edit

Immediate Workflow Actions

Type	Description
Task	discount request
Task	Discount approval
Email Alert	A new discount application needs to be reviewed

Email Alert

A new discount application needs to be reviewed

[Back to List: Workflow Rules](#)

Rules Using This Email Alert (1) | Approval Processes Using This Email Alert (0) | Enrollment Processes Using This Email Alert (0)

Email Alert Detail

EditDeleteClone

Description	A new discount application needs to be reviewed			Email Template	A new discount request needs to be reviewed
Unique Name	A_new_discount_application_needs_to_be_reviewed			Object	Invoice
From Email Address	Current User's email address				
Recipients	Role: Manager Role: Duty Manager				
Additional Emails					
Created By	Zheng Wang, 23/10/2023, 12:30 am	Modified By	Zheng Wang, 23/10/2023, 12:30 am		

EditDeleteClone

Rules Using This Email Alert

Rules Using This Email Alert Help ?

Action	Rule Name	Description	Object	Active
Edit Deactivate	Invoice-DiscountApproval	When a discount request is created.	Invoice	<input checked="" type="checkbox"/>

Email Template Detail

Edit PropertiesEdit HTML VersionEdit Text VersionDeleteClone

Email Templates from Salesforce	Unfiled Public Classic Email Templates	Available For Use	<input checked="" type="checkbox"/>
Email Template Name	A new discount request needs to be reviewed	Last Used Date	
Template Unique Name	A_new_discount_request_needs_to_be_reviewed	Times Used	
Encoding	General UTF-8 Western Europe (ISO-8859-1, ISO-LATIN-1)		
Author	salesforce.com (Change)		
Description	A new discount request needs to be reviewed		
Created By	salesforce.com, 4/10/2023, 9:56 am	Modified By	Zheng Wang, 10/10/2023, 9:54 pm

Edit PropertiesEdit HTML VersionEdit Text VersionDeleteClone

Email Template

Send Test and Verify Merge Fields

Subject

A new discount request needs to be reviewed

HTML Preview

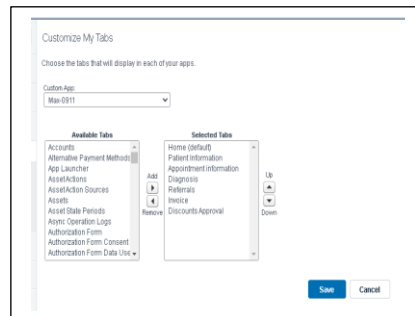
Dear Manager Team, A new discount request has been created in the system. Please review it as soon as possible and decide whether to approve it or not. Thank you. Admin Team

Plain Text Preview

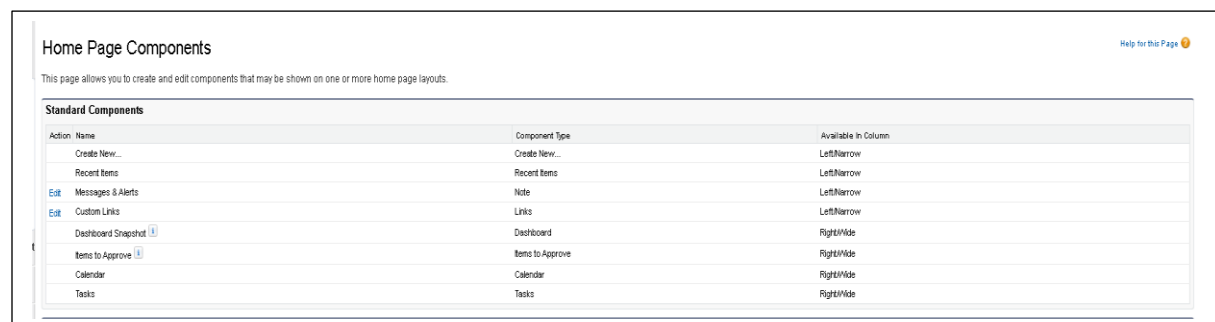
Dear Manager Team,
A new discount request has been created in the system. Please review it as soon as possible and decide whether to approve it or not.
Thank you,
Admin Team

d) Prototype System Screens

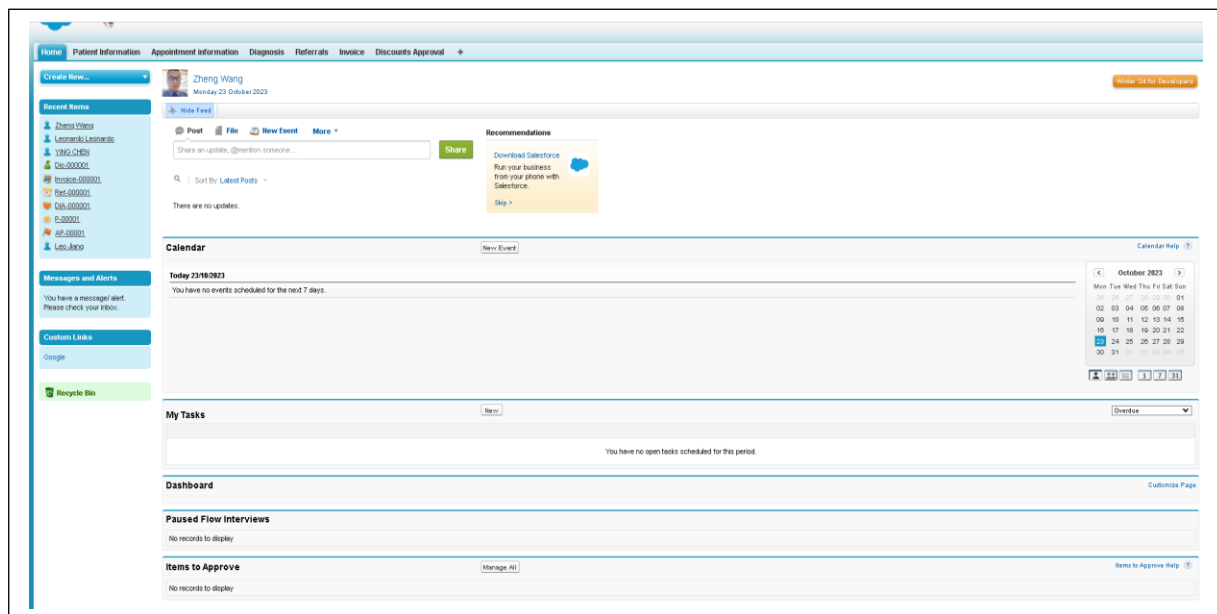
The original interface begins with the inclusion of Home and all tabs. As previously mentioned, the system can restrict job permissions in a small clinic work environment. Use 'Customise My Tabs' to select the Tabs on the home page.



On the left side of the screen are 'Create New', 'Recent Items', 'Messages and Alerts' and 'Custom Links'. The main screen displays Calendar, My Tasks, Dashboard, Pause Flow Interviews and Items to Approve. Use 'Home Page Components' in 'Customise' to select the desired components. Furthermore, set the position of each component in 'Home Page Layouts'.



The resulting page is as follows.



4 Conclusion and Future Work Section

The current system is only part of the system for a single clinic. As far as individual clinics are concerned, more modules and features can be added to the system. For example, adding a scheduling module, especially for doctors. It will allow patients to be scheduled for appointments based on the doctor's schedule and the average length of the consultation. Also, add printing functionality so doctors and admins can print prescriptions or invoices.

On a larger scale, when more clinics are in the system, the patient can choose the clinic and doctor that is suitable or feasible for the appointment. Staff can work in different clinics. Staff with permissions can review information from other clinics, e.g. a doctor in Clinic A can review information from a patient's diagnosis in Clinic B when diagnosing the patient.

At the group level, the HR department can first deploy the staff scheduling and attendance record module and combine it with the payroll module to automatically calculate salaries. The data statistics department uses the data analysis module to analyse the clinic, doctor consultation and diagnosis time, develop a reasonable appointment time and ensure that the patient's waiting time is reasonable. The customer service department deploys the customer survey module to conduct customer satisfaction surveys and can communicate directly with customers online via email and live chat.

All of the above are necessary features for a group of clinics and individual clinics. These features can be an effective PaaS system that improves efficiency and reduces costs across departments and staff. It is the purpose of using the PaaS system.

It is worth noting that when we use a PaaS system, relevant information, including corporate information and customer information (privacy), is held by the PaaS platform. Both the enterprise and the platform hold data control. In practice, we need to pay attention to choosing a reliable platform, signing relevant agreements under the law, and effectively encrypting and backing up data.