

# Modernization of Northwood Housing Society using Salesforce CRM

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Strategic ICT & e-business implementation Project

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## **About the Organization:**

The Northwood Housing Society is one of the major student house letting organization in the Santry neighbourhood. The community has 50 single, double and triple bedroom apartments that are rented out to students coming to Dublin every academic year. It offers students with wide range of services that include timely maintenance, laundry service, car park and rental bikes, providing them the perfect atmosphere to study.

## **Vision:**

The vision of the organization is to provide first class service and environment to our customers and grow to become the top student accommodation community in Dublin.

## **Infrastructure:**

At present the Northwood Housing Society manage their data using traditional registers and log books. The customers face difficulty in raising requests for services. Every month, the tenants face difficulty in paying bills manually. Even though the agency provides several services like laundry, bike rentals etc., accessibility is an issue. All complaints with regards to the amenities and infrastructure are being registered manually at the office. No online portal for tenant account and feedback.

## **Scope of Improvement:**

Based on the data collected from the Northwood Housing Society, the following improvements can be made.

- Create a portal for customers to raise request for maintenance services.
- Create a portal to register and maintain customer records.
- Create an account for the individual tenants to make bill payments.
- Create an online portal for tenants to access and pay for amenities like laundry, car park, rental bikes services.

## **Business Requirement:**

To develop and support an automated system involving huge amount of customer data on day to day basis, to maintain a proper database and for analysis of data collected, we need a significant platform to carry out the entire task. This is where Salesforce comes into play.

## Infrastructure and Platform Details

### Buy vs Build:

BUILD COST FACTOR	BUY COST FACTOR
> Software Development Resources	> Software Licensing
> Software Quality Control and Testing	> Software Implementation and Integration
> Software Configuration and Deployment	> Application Customization
> End-User Training	> End-User Training
> Ongoing Maintenance and Enhancement [RTS]	Ongoing Maintenance and Support Fees
>Software End of life	Software End of Life

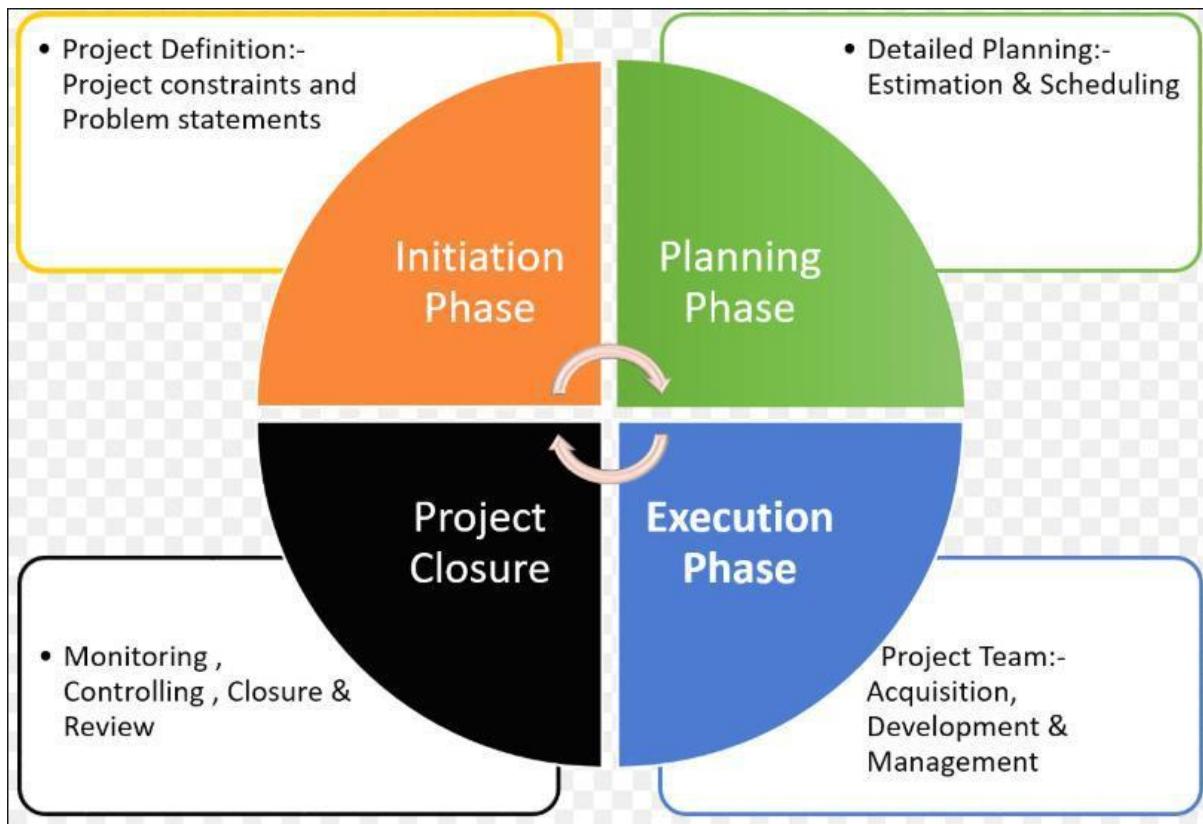
(Reference: <http://image.slidesharecdn.com/buildvsbuyopa-130220200203-phpapp02/95/build-vs-buy-strategy-4-638.jpg?cb=1362256620>)

### On Premise vs Hosted vs Cloud:

	On-Premises	Cloud-Hosted	Cloud-SaaS
IT Requirement - Resources, Infrastructure and Investment	More Intense	Moderate	Less Intense
Total Cost of Ownership	Greatest Initial Investment	Moderate Investment	Lowest Initial cost
Software License	You Own it	You Own it	You Rent It
Use License Expired	Never	Never	Upon Non-Payment
Accounting Principles	Capital lease/Asset	Capital lease/Asset	Operating Lease/Expense
Frequent of Upgrades	18-24 Months	18-24 Months	Automatically
Customization	Unlimited	Unlimited	May be limited
Add-ons	Based on Compatibility	Based on Compatibility	May be limited
Service Level Agreements/Uptime	Does not apply	Per-Contract Terms	Per-Contract Terms
Access to data	User-Based Security	User-Based Security	Restricted corporate-wide
Extra Data Storage Required	Add Hardware	Extra Fees may apply	Extra Fees may apply
Server Security Risk	Internally Managed	Externally Managed	Externally Managed

(Reference: <https://www.rklesolutions.com/wp-content/uploads/2015/04/cloud-hosted-on-premises.png>)

## Project Development Cycle:



(Reference: <https://www.guru99.com/initiation-phase-project-management-life-cycle.html>)

## Solution with Salesforce:

The on-demand software by the Salesforce provides a highly feasible networking, hardware and software platform for customers. This user-friendly service helps clients to improve their sales and strengthens their communication system through several SaaS applications, namely Salesforce Chatter, Sales Cloud, and Service Cloud. Using salesforce, the customer data collected can be analysed with dashboard app readily available, to derive business insights for improvement in services to customers and financial market of the company.

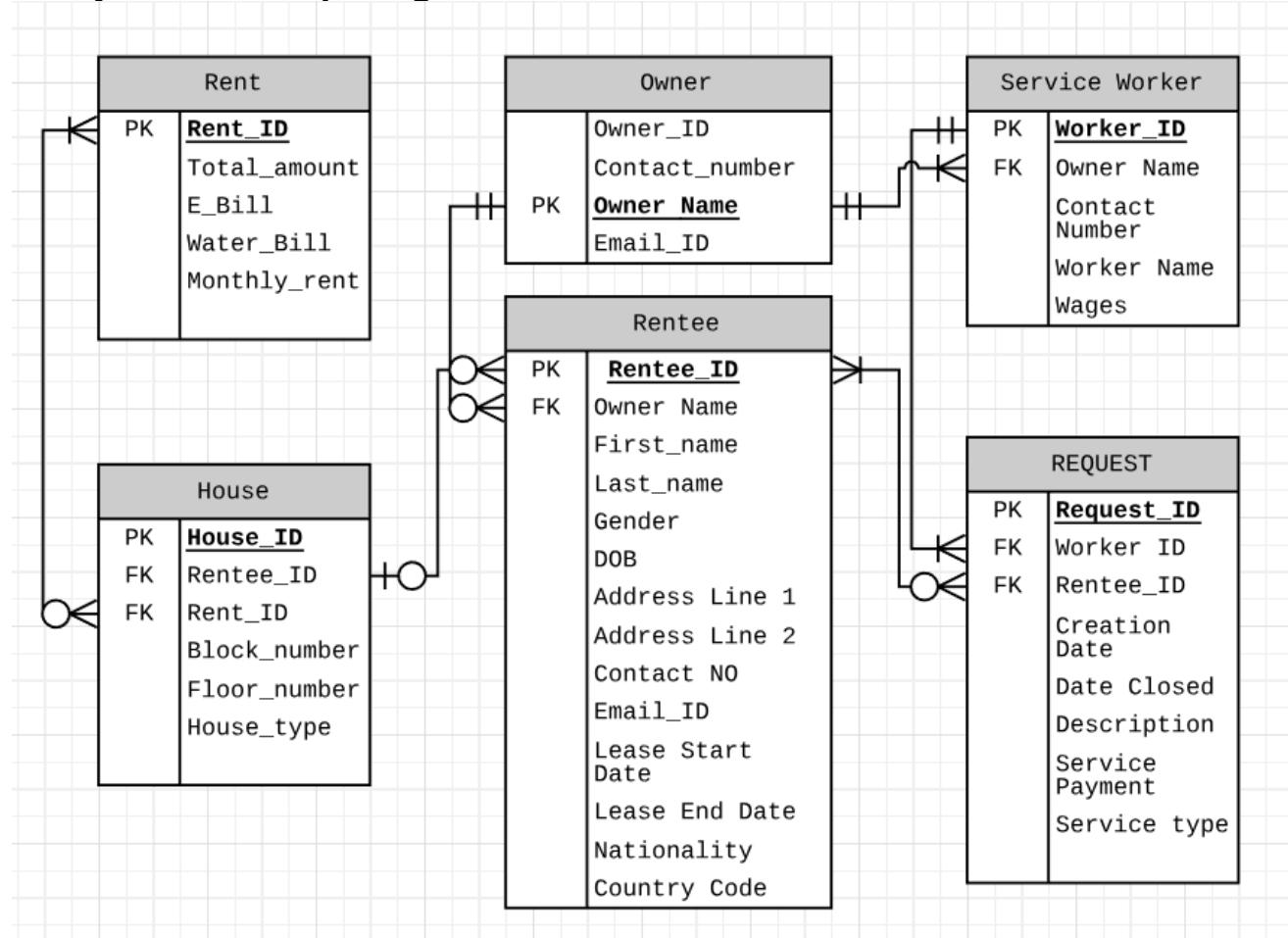
(Reference: <https://www.dezyre.com/article/what-is-salesforce-and-5-reasons-why-it-is-the-best-crm/90>)

## How Salesforce can benefit Northwood Housing Society:

- The booking of the services can be made online using a service request portal and it will be convenient for the customers to raise requests for the appropriate services.
- The owners will have proper database of their customers which will in turn be used for analytics purpose.
- Each tenant will be having their own account where they can check their rental details and payment receipts.
- Less interaction between the customer and the owner.
- Automated receipt and remainder emails on receiving payments from customers.

## Logical design

### Entity Relationship Diagram:



The ERD is designed with the help of Lucid chart web application.

## DATA DICTIONARY:

### OWNER

Serial No.	Column Name	Column Type	Description
1	Owner Name	Text(80)	Unique name for the owner (primary Key)
2	Contact Number	Phone	Contact number of the owner
3	Email_ID	Email (External ID) (Unique)	Email Id of the owner
4	Owner ID	Auto Number (External ID)	Unique ID for the Owner

### RENTEE

Serial. No	Column Name	Column Type	Description
1	Rentee_ID	Auto Number	Unique ID for the rentees (primary Key)
2	Owner name	Lookup(Owner)	Unique ID for the owner (foreign Key)
3	Address Line 1	Text(30)	Address line of the Rentee
4	Address Line 2	Text(30)	Address line of the Rentee
5	Contact Number	Phone	Contact number of the Rentee
6	Country Code	Text(2)	Country Code of Rentee
7	Gender	Picklist	Unique ID for the rentee's first name
8	DOB	Date	Unique ID for the rentee's date of birth
9	First Name	Text(30)	First Name of the Rentee
10	Last Name	Text(30)	Last Name of the Rentee
12	Nationality	Picklist	Nationality for the rentee's
13	Leasing start date	Date	Starting date of the Rentees lease
14	Leasing end date	Formula(Date)	Ending date of the Rentees lease

### HOUSE

Serial. No	Column Name	Column Type	Description
1	House_ID	Auto Number	Unique ID for the house (primary key)
2	Rent_ID	Lookup(RENT)	Unique ID for the rooms in the house (foreign key)
3	Rentee_ID	Lookup(RENTEE)	Unique ID for the rentees (foreign key)
4	Block number	Number(2, 0)	Unique number for the blocks
5	Floor number	Number(2, 0)	Unique number for the floor
6	House_type	Picklist	House type

## RENT

<b>Serial. No</b>	<b>Column Name</b>	<b>Column Type</b>	<b>Description</b>
1	Rent_ID	Auto Number	Unique ID for the rent paid by the Rentees (primary key)
2	Total_Amount	Formula(Currency)	Total money for rent including rent and bills
3	E_Bill	Currency(5, 0)	Electricity bill for the unique houses
4	Water_Bill	Currency(5, 0)	Water bill for the unique house
5	Rent	Currency(5, 0)	Rent for the house

## SERVICE WORKERS

<b>Serial. No</b>	<b>Column Name</b>	<b>Column Type</b>	<b>Description</b>
1	Woker_ID	Auto Number	Unique ID of the Worker (primary Key)
2	OWNER	Lookup(Owner)	Unique ID of the Owner (Foreign Key)
3	Worker Name	Text (30)	Name of the Worker
4	Contact_number	Phone	Phone number of the worker
5	Wages	Currency(3, 0)	Wages given to the workers

## REQUEST

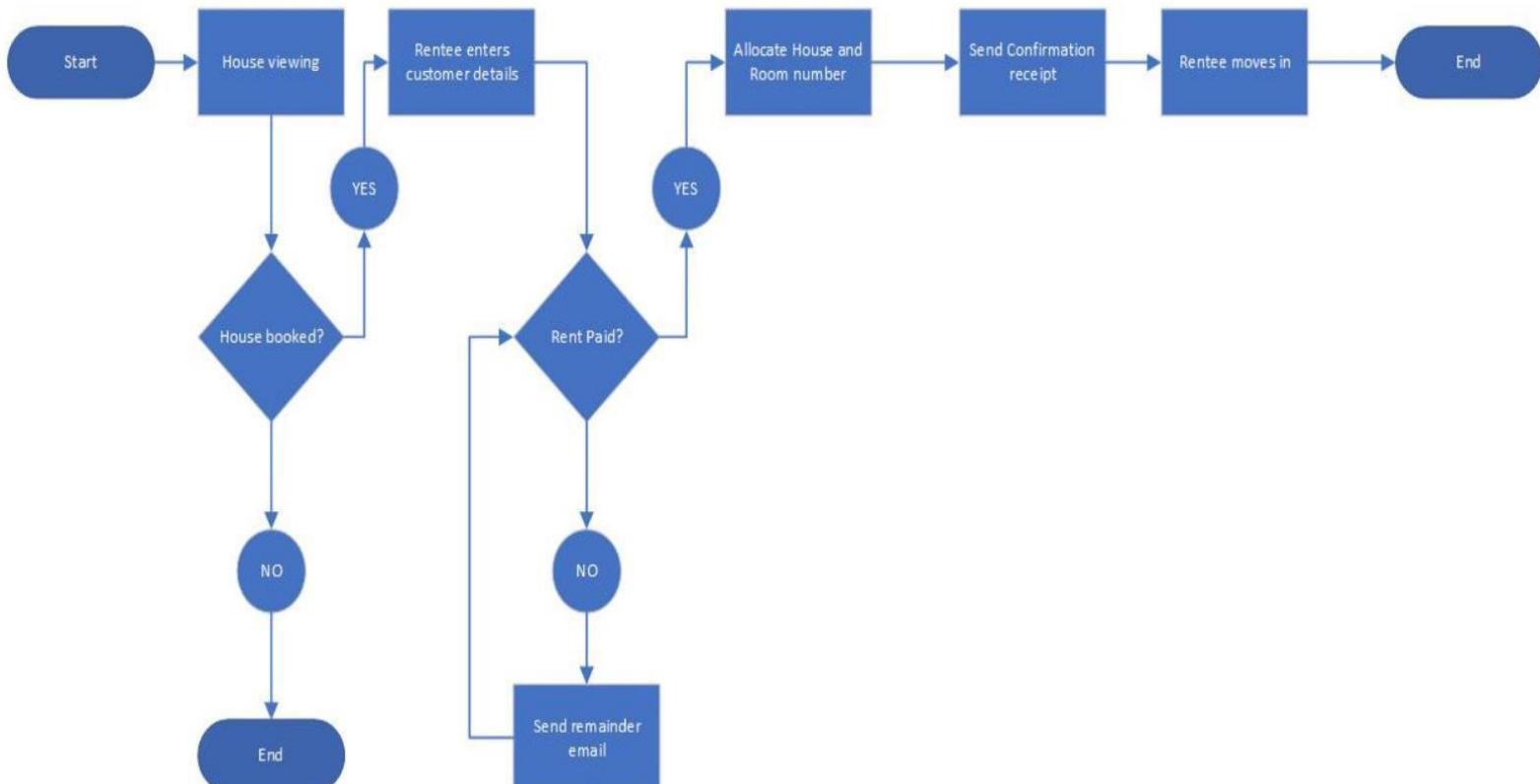
<b>Serial. No</b>	<b>Column Name</b>	<b>Column Type</b>	<b>Description</b>
1	Request_ID	Auto Number	Unique ID of the request (primary key)
2	Rentee_ID	Lookup(RENTEE)	Unique ID of the Rentee (foreign key)
3	Worker_ID	Auto Number	Unique Id of the Worker(foreign key)
4	Creation Date	Date	Date of request creation
5	Date Closed	Date	Date of request closure
6	Service Type	Picklist	Type of service requested
7	Service Payment	Formula (Currency)	Payment for the service used
8	Description	Text(50)	Description of the service requested

# Process flow diagrams

The below process flow diagrams are designed using Microsoft VISIO:

## House Letting Process:

### House Letting process Linear flow chart

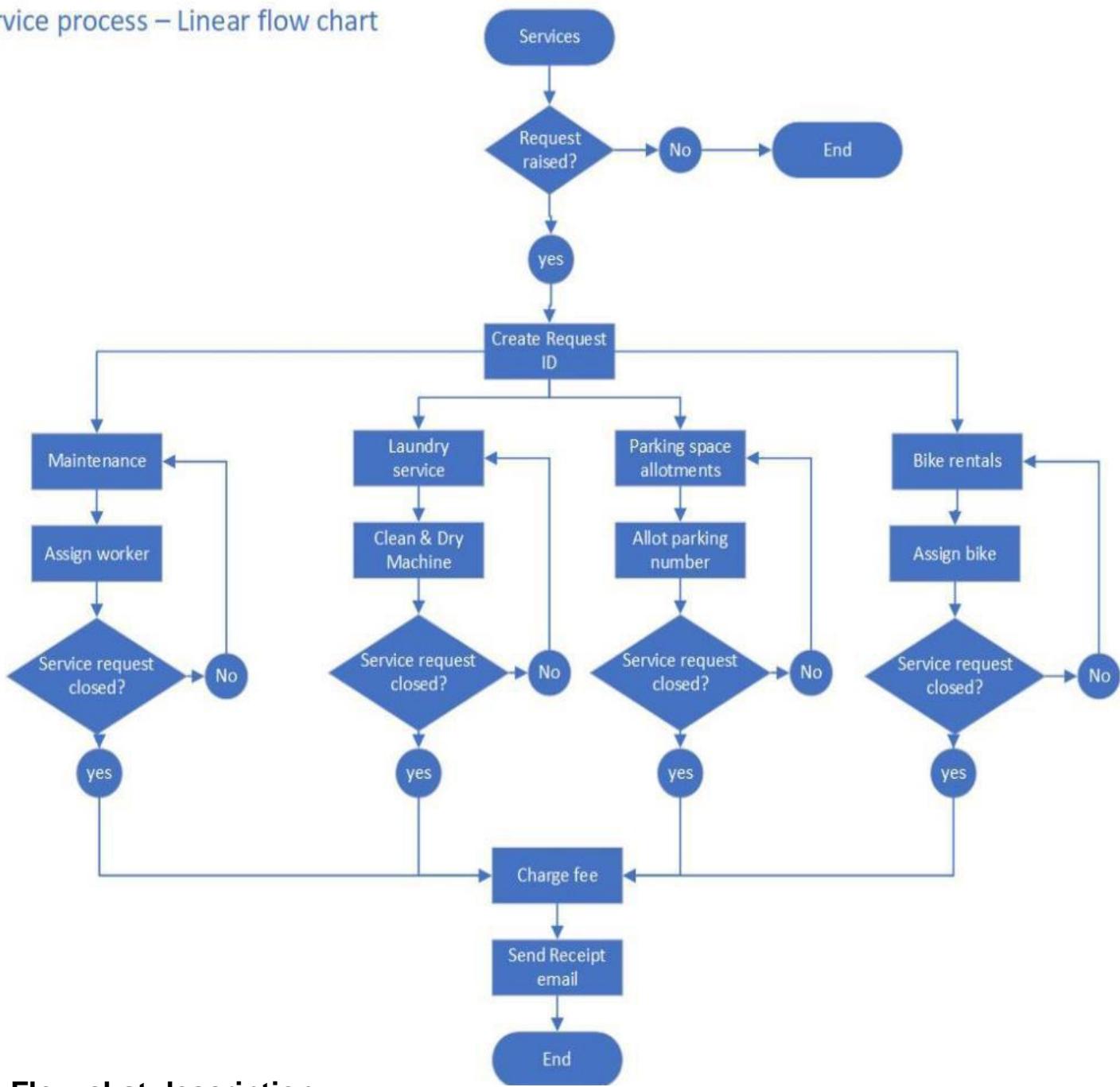


### Flow Chart description:

The House letting process flow begins when a potential customer requests for a viewing. If the negotiation is successful, the customer then enters their details in the database and then pays the initial deposit amount to secure an apartment. Once the booking is done, the customer receives an automated Email with the receipt of the booking along with the details of the allocated house and room number. The customer then moves in to their allocated apartment.

## Rentee Service Process:

Rentee service process – Linear flow chart

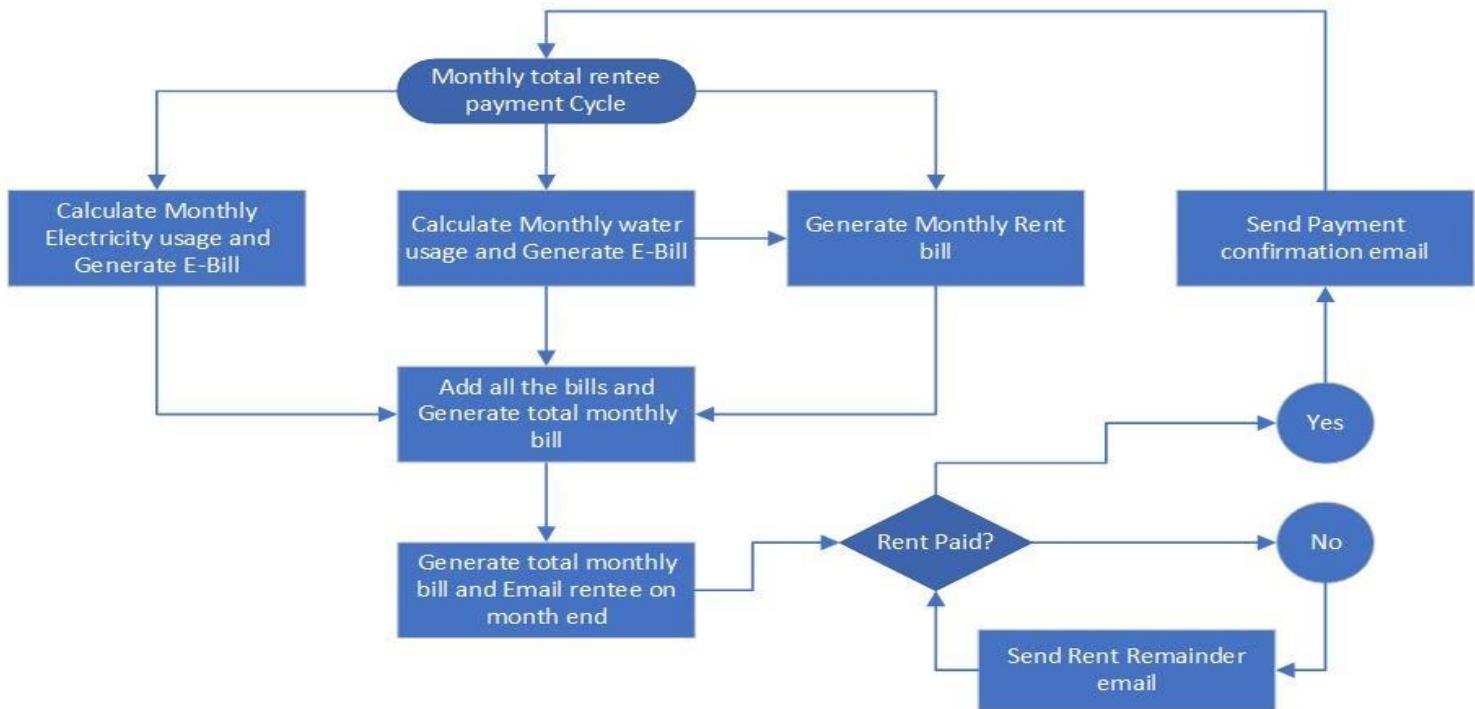


### Flow chat description:

The process flow begins with the rentee requesting for a service. Once a request is raised, the rentee receives an automated mail which contains the request ID and information about the worker allocated for the service. Once the Service is done and the rentee is satisfied, the case is closed, and an automated mail is generated to the customer which contains the details of the service and the bill amount due.

## Monthly Rent Payment Cycle:

### Monthly Rent payment cycle – Linear flow chart



### Flow Chart description:

The Customer is sent a remainder email during the last week of every month about the total bill the customer has to pay before the start of next month, which includes charges for the monthly electricity usage, water usage and rent. Once the customer pays off the remaining bill, another confirmation mail is sent to the customer confirming about the same.

### Data capture points:

- Personal details such as name, nationality, DOB from each customer is collected in the rentee's details portal.
- Contact Details such as email id and contact number from each customer is collected in the rentee's details portal.
- Raised service request by customers in service request portal is collected.

## BUSINESS RULES

<b>Unique ID</b>	<b>Name</b>	<b>Business Rule</b>	<b>Purpose</b>	<b>Owner</b>
BR 101	New Customer	Collect and verify ID proof from the customer	Identity	Management
BR 102	Allocation	Allocate rooms and keys to customer based on Needs	Allocation	Management
BR 103	Society Rules	Explain the Society rules to the new rentees	Safety Purpose	Management
BR 104	Contract length	Initial contract will be for 12 months, after that a new contract will be Discussed	Contract	Management
BR 105	Service Usage	The rentees must use the services without causing any damage	Safety Purpose	Rentee
BR 106	Maintenance	Swift response for maintenance issues	House Keeping	Management
BR 107	Total monthly Rent	Total monthly payment must be credited to the owner before 2 <sup>nd</sup> day of every month.	Payment	Rentee
BR 108	Security	Any violence physically or verbally will result in contract termination immediately	Security	Management

## IMPLEMENTATION IN SALESFORCE:

Custom objects were created using salesforce application as per the ERD diagram designed in the logical design section.

### Custom objects created:

The screenshot shows the Salesforce custom object list page. On the left, there's a sidebar with 'Lightning Experience Migration Assistant' and 'Salesforce Mobile Quick Start' sections. The main area has a 'Custom Objects' heading and a table listing seven custom objects: HOUSE, OWNER, RENT, RENTEE, REQUEST, SERVICE TYPE, and SERVICE WORKER. Each row includes an 'Edit | Del' link and a 'Deployed' column with a checked checkbox. A 'Deleted Objects (1)' link is also present.

Action	Label	Master Object	Deployed	Description
Edit   Del	HOUSE		✓	Contains details of the houses.
Edit   Del	OWNER		✓	Contains the details of the owner.
Edit   Del	RENT		✓	Rent details
Edit   Del	RENTEE		✓	Contains the details of Renter.
Edit   Del	REQUEST		✓	Types of service request created.
Edit   Del	SERVICE TYPE		✓	Type of services requested
Edit   Del	SERVICE WORKER		✓	Details of service workers.
Deleted Objects (1)				

## Custom Fields & Relationships:

### House:

The screenshot shows the 'Custom Object Definition Detail' for the 'HOUSE' object. It includes sections for 'Standard Fields' and 'Custom Fields & Relationships'. In the 'Standard Fields' section, it lists fields like 'Created By', 'Last Modified By', and 'Owner'. In the 'Custom Fields & Relationships' section, it lists fields like 'Block\_number', 'Floor\_number', 'House\_type', 'Rent\_ID', and 'Renter\_ID'.

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History
Edit	Created By	CreatedBy	Lookup(User)			
Edit	House_ID	Name	Auto Number		✓	
Edit	Last Modified By	LastModifiedBy	Lookup(User)			
Edit	Owner	Owner	Lookup(User,Queue)		✓	

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Track History
Edit   Del	Block_number	Block_number__c	Number(2, 0)			Ram Krishnan, 15/12/2018 19:49	
Edit   Del	Floor_number	Floor_number__c	Number(2, 0)			Ram Krishnan, 15/12/2018 01:18	
Edit   Del   Replace	House_type	House_type__c	Picklist			Ram Krishnan, 15/12/2018 19:48	
Edit   Del	Rent_ID	Rent_ID__c	Lookup(RENT)	✓		Ram Krishnan, 14/12/2018 23:48	
Edit   Del	Renter_ID	Renter_ID__c	Lookup(RENTEE)	✓		Ram Krishnan, 16/12/2018 02:00	
Deleted Fields (5)							

## OWNER:

Expand All | Collapse All



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- Manage Territories
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- Security Controls
- Domain Management
- Communication Templates
- Translation Workbench
- Data Management
- Mobile Administration
- Desktop Administration
- Outlook Integration and Sync
- Lightning for Gmail and Sync
- Email Administration
- Google Apps
- Analytics

Custom Object Definition Detail

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Standard Fields Help
<a href="#">Edit</a>	<a href="#">Created By</a>	<a href="#">CreatedBy</a>	Lookup(User)			Ram Krishnan	15/12/2018 00:49
<a href="#">Edit</a>	<a href="#">Last Modified By</a>	<a href="#">LastModifiedBy</a>	Lookup(User)			Ram Krishnan	15/12/2018 00:50
<a href="#">Edit</a>	<a href="#">Owner</a>	<a href="#">Owner</a>	Lookup(User,Queue)			Ram Krishnan	15/12/2018 00:55
<a href="#">Edit</a>	<a href="#">Owner Name</a>	<a href="#">Name</a>	Text(80)			Ram Krishnan	15/12/2018 23:13

Standard Fields

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Standard Fields Help
<a href="#">Edit</a>	<a href="#">Contact number</a>	<a href="#">Contact_number_c</a>	Phone			Ram Krishnan	15/12/2018 00:49
<a href="#">Edit</a>	<a href="#">Email ID</a>	<a href="#">Email_ID_c</a>	Email (External ID) (Unique)			Ram Krishnan	15/12/2018 00:50
<a href="#">Edit</a>	<a href="#">Owner ID</a>	<a href="#">Owner_ID_c</a>	Auto Number (External ID)			Ram Krishnan	15/12/2018 00:55
<a href="#">Deleted Fields (5)</a>							

Custom Fields & Relationships

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Custom Fields & Relationships Help
<a href="#">Edit</a>	<a href="#">E_Bill</a>	<a href="#">E_Bill_c</a>	Currency(5, 0)			Ram Krishnan	15/12/2018 20:05
<a href="#">Edit</a>	<a href="#">Monthly_Rent</a>	<a href="#">Monthly_Rent_c</a>	Currency(5, 0)			Ram Krishnan	15/12/2018 20:06
<a href="#">Edit</a>	<a href="#">Total_Amount</a>	<a href="#">Total_Amount_c</a>	Formula (Currency)			Ram Krishnan	15/12/2018 20:06
<a href="#">Edit</a>	<a href="#">Water_Bill</a>	<a href="#">Water_Bill_c</a>	Currency(5, 0)			Ram Krishnan	15/12/2018 20:07
<a href="#">Deleted Fields (2)</a>							

## RENT:

Expand All | Collapse All



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- Data Management
- Mobile Administration
- Desktop Administration
- Outlook Integration and Sync
- Lightning for Gmail and Sync
- Email Administration
- Google Apps
- Analytics
- Data.com Administration

Custom Object Definition Detail

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Standard Fields Help
<a href="#">Edit</a>	<a href="#">Created By</a>	<a href="#">CreatedBy</a>	Lookup(User)			Ram Krishnan	15/12/2018 14:29
<a href="#">Edit</a>	<a href="#">Last Modified By</a>	<a href="#">LastModifiedBy</a>	Lookup(User)			Ram Krishnan	15/12/2018 14:29
<a href="#">Edit</a>	<a href="#">Owner</a>	<a href="#">Owner</a>	Lookup(User,Queue)			Ram Krishnan	15/12/2018 14:29
<a href="#">Edit</a>	<a href="#">RENT ID</a>	<a href="#">Name</a>	Auto Number			Ram Krishnan	15/12/2018 14:29

Standard Fields

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Track History
<a href="#">Edit</a>	<a href="#">Created By</a>	<a href="#">CreatedBy</a>	Lookup(User)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">Last Modified By</a>	<a href="#">LastModifiedBy</a>	Lookup(User)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">Owner</a>	<a href="#">Owner</a>	Lookup(User,Queue)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">RENT ID</a>	<a href="#">Name</a>	Auto Number			Ram Krishnan	

Custom Fields & Relationships

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Track History
<a href="#">Edit</a>	<a href="#">E_Bill</a>	<a href="#">E_Bill_c</a>	Currency(5, 0)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">Monthly_Rent</a>	<a href="#">Monthly_Rent_c</a>	Currency(5, 0)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">Total_Amount</a>	<a href="#">Total_Amount_c</a>	Formula (Currency)			Ram Krishnan	
<a href="#">Edit</a>	<a href="#">Water_Bill</a>	<a href="#">Water_Bill_c</a>	Currency(5, 0)			Ram Krishnan	
<a href="#">Deleted Fields (2)</a>							

## RENTEE:

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History
Created By	Created By	CreatedBy	Lookup(User)			<input type="checkbox"/>
Last Modified By	Last Modified By	LastModifiedBy	Lookup(User)			<input type="checkbox"/>
Edit	Owner	Owner	Lookup(User,Queue)		✓	<input type="checkbox"/>
Edit	Rentee_ID	Name	Auto Number		✓	<input type="checkbox"/>

Custom Fields & Relationships							Custom Fields & Relationships Help <a href="#">?</a>
Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Track History
Edit   Del	Address Line 1	Address_Line_1_c	Text(30)			Ram Krishnan, 15/12/2018 19:58	<input type="checkbox"/>
Edit   Del	Address Line 2	Address_Line_2_c	Text(30)			Ram Krishnan, 15/12/2018 19:59	<input type="checkbox"/>
Edit   Del	Contact Number	Contact_Number_c	Phone			Ram Krishnan, 15/12/2018 14:43	<input type="checkbox"/>
Edit   Del	Country Code	Country_Code_c	Text(2)			Ram Krishnan, 15/12/2018 18:42	<input type="checkbox"/>
Edit   Del	DOB	DOB_c	Date			Ram Krishnan, 13/12/2018 21:38	<input type="checkbox"/>
Edit   Del	Email ID	Email_ID_c	Email			Ram Krishnan, 16/12/2018 01:39	<input type="checkbox"/>
Edit   Del	First Name	First_Name_c	Text(30)			Ram Krishnan, 13/12/2018 21:36	<input type="checkbox"/>
Edit   Del   Replace	Gender	Gender_c	Picklist			Ram Krishnan, 15/12/2018 18:13	<input type="checkbox"/>
Edit   Del	Last Name	Last_Name_c	Text(30)			Ram Krishnan, 13/12/2018 21:36	<input type="checkbox"/>
Edit   Del	Leasing end date	Leasing_end_date_c	Formula (Date)			Ram Krishnan, 15/12/2018 19:55	<input type="checkbox"/>
Edit   Del	Leasing start date	Leasing_start_date_c	Date			Ram Krishnan, 15/12/2018 19:54	<input type="checkbox"/>
Edit   Del   Replace	Nationality	Nationality_c	Picklist			Ram Krishnan, 16/12/2018 01:37	<input type="checkbox"/>
Edit   Del	Owner name	Owner_name_c	Lookup(OWNER)	✓		Ram Krishnan, 16/12/2018 03:23	<input type="checkbox"/>
<a href="#">Deleted Fields (8)</a>							

## REQUEST:

Custom Object Definition Detail							Standard Fields Help <a href="#">?</a>
Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History	
Singular Label	REQUEST						Description Types of service request created.
Plural Label	REQUESTS						Enable Reports ✓
Object Name	REQUEST						Track Activities ✓
API Name	REQUEST__c						Allow in Chatter Groups ✓
							Allow Sharing ✓
							Allow Bulk API Access ✓
							Allow Streaming API Access ✓
							Track Field History ✓
							Deployment Status Deployed
							Allow Search ✓ Indexing completed on 15 December 2018 01:17:25 GMT
							Help Settings Standard salesforce.com Help Window
							Modified By Ram Krishnan, 16/12/2018 06:37

Standard Fields							Standard Fields Help <a href="#">?</a>
Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History	
Created By	Created By	CreatedBy	Lookup(User)				<input type="checkbox"/>
Last Modified By	Last Modified By	LastModifiedBy	Lookup(User)				<input type="checkbox"/>
Edit	Owner	Owner	Lookup(User,Queue)		✓		<input type="checkbox"/>
Edit	Request_ID	Name	Auto Number		✓		<input type="checkbox"/>

Custom Fields & Relationships							Custom Fields & Relationships Help <a href="#">?</a>
Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By	Track History
Edit   Del	Creation date	Creation_date_c	Date			Ram Krishnan, 16/12/2018 02:16	<input type="checkbox"/>
Edit   Del	Date closed	Date_closed_c	Date			Ram Krishnan, 16/12/2018 01:23	<input type="checkbox"/>
Edit   Del	Description	Description_c	Text(50)			Ram Krishnan, 13/12/2018 22:09	<input type="checkbox"/>
Edit   Del	Rentee ID	Rentee_ID_c	Lookup(RENTEE)	✓		Ram Krishnan, 16/12/2018 02:06	<input type="checkbox"/>
Edit   Del	Service payment	Service_payment_c	Formula (Currency)			Ram Krishnan, 16/12/2018 02:21	<input type="checkbox"/>
Edit   Del   Replace	Service type	Service_type_c	Picklist			Ram Krishnan, 16/12/2018 01:07	<input type="checkbox"/>
Edit   Del	Worker ID	Worker_ID_c	Lookup(SERVICE WORKER)	✓		Ram Krishnan, 16/12/2018 15:13	<input type="checkbox"/>

## SERVICE TYPE:

Expand All | Collapse All



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Created By Ram Krishnan 13/12/2018 22:01

Custom Object Definition Detail						
				Edit	Delete	Truncate
Singular Label	SERVICE TYPE			Description	Type of services requested.	
Plural Label	SERVICE TYPES			Enable Reports	<input checked="" type="checkbox"/>	
Object Name	SERVICE_TYPE			Track Activities	<input checked="" type="checkbox"/>	
API Name	SERVICE_TYPE__c			Allow in Chatter Groups	<input checked="" type="checkbox"/>	
				Allow Sharing	<input checked="" type="checkbox"/>	
				Allow Bulk API Access	<input checked="" type="checkbox"/>	
				Allow Streaming API Access	<input checked="" type="checkbox"/>	
				Track Field History	<input checked="" type="checkbox"/>	
				Deployment Status	Deployed	
				Allow Search	<input checked="" type="checkbox"/>	
				Help Settings	Indexing completed on 15 December 2018 01:17:27 GMT Standard salesforce.com Help Window	
				Modified By	Ram Krishnan 15/12/2018 21:22	
Standard Fields						
Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History
Edit	Created By	CreatedBy	Lookup(User)			<input type="checkbox"/>
Edit	Last Modified By	LastModifiedBy	Lookup(User)			<input type="checkbox"/>
Edit	Owner	Owner	Lookup(User,Queue)		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit	Record Type	RecordType	Record Type		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit	Service ID	Name	Auto Number		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Fields & Relationships						
Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
Edit   Del	Payment	Payment__c	Formula (Currency)			Ram Krishnan, 15/12/2018 22:01
Edit   Del   Replace	Service_type	Service_type__c	Picklist			Ram Krishnan, 15/12/2018 17:31
<a href="#">Deleted Fields (2)</a>						

## SERVICE WORKER:

Expand All | Collapse All



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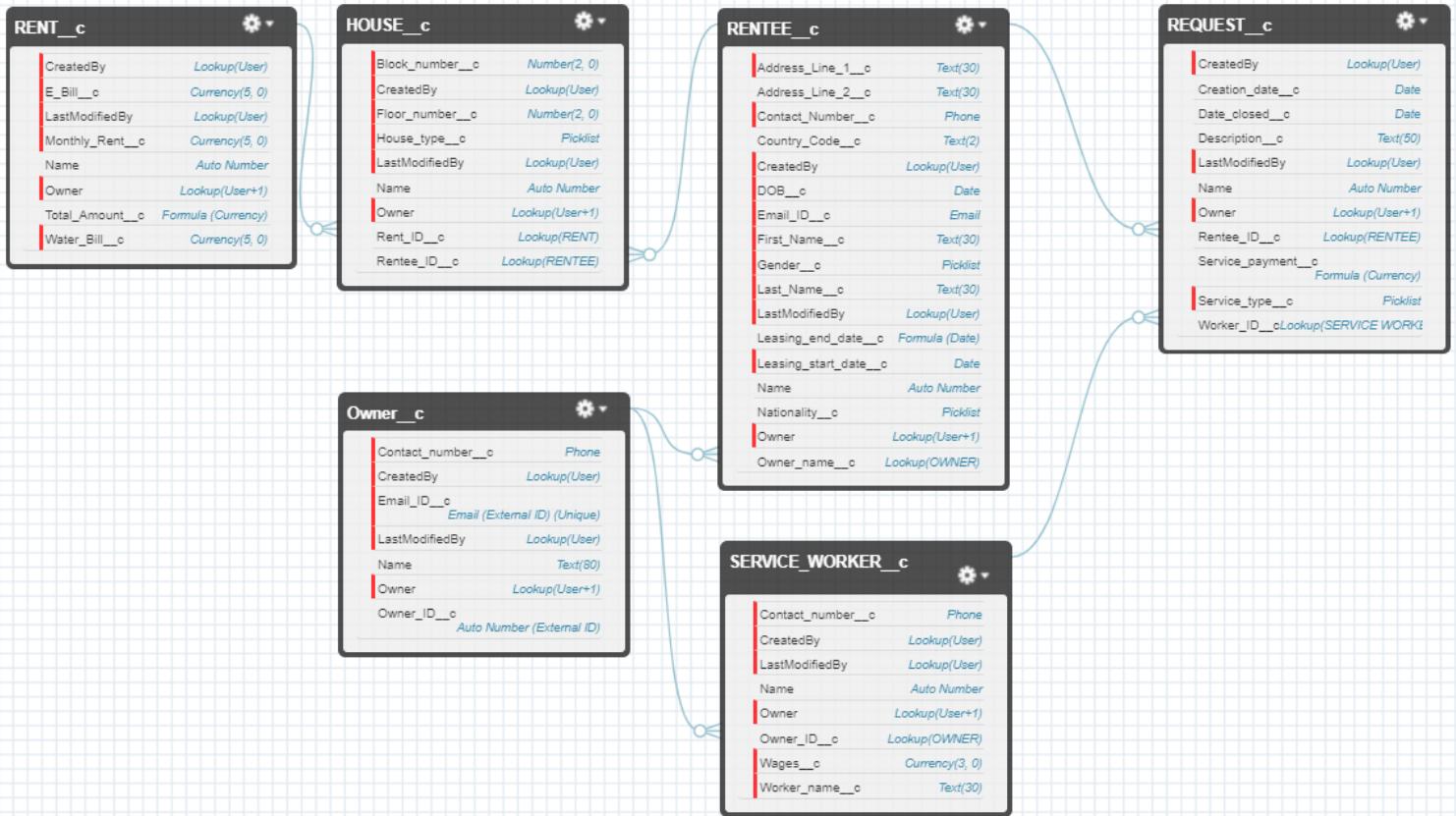
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Created By Ram Krishnan 13/12/2018 22:10

Custom Object Definition Detail						
				Edit	Delete	Truncate
Singular Label	SERVICE WORKER			Description	Details of service workers.	
Plural Label	SERVICE WORKERS			Enable Reports	<input checked="" type="checkbox"/>	
Object Name	SERVICE_WORKER			Track Activities	<input checked="" type="checkbox"/>	
API Name	SERVICE_WORKER__c			Allow in Chatter Groups	<input checked="" type="checkbox"/>	
				Allow Sharing	<input checked="" type="checkbox"/>	
				Allow Bulk API Access	<input checked="" type="checkbox"/>	
				Allow Streaming API Access	<input checked="" type="checkbox"/>	
				Track Field History	<input checked="" type="checkbox"/>	
				Deployment Status	Deployed	
				Allow Search	<input checked="" type="checkbox"/>	
				Help Settings	Indexing completed on 15 December 2018 01:17:26 GMT Standard salesforce.com Help Window	
				Modified By	Ram Krishnan, 15/12/2018 23:55	
Standard Fields						
Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History
Edit	Created By	CreatedBy	Lookup(User)			<input type="checkbox"/>
Edit	Last Modified By	LastModifiedBy	Lookup(User)			<input type="checkbox"/>
Edit	Owner	Owner	Lookup(User,Queue)		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit	Worker ID	Name	Auto Number		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom Fields & Relationships						
Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
Edit   Del	Contact number	Contact_number__c	Phone			Ram Krishnan, 15/12/2018 01:23
Edit   Del	OWNER	Owner_ID__c	Lookup(OWNER)	<input checked="" type="checkbox"/>		Ram Krishnan, 15/12/2018 23:18
Edit   Del	Wages	Wages__c	Currency(3, 0)			Ram Krishnan, 15/12/2018 20:09
Edit   Del	Worker name	Worker_name__c	Text(30)			Ram Krishnan, 16/12/2018 01:03
<a href="#">Deleted Fields (2)</a>						

## SCHEMA:



Schema in the above figure was designed using the schema builder in salesforce.

## Validation Rules:

### RENTEE:

Validation Rules					
Action	Rule Name	Error Location	Error Message	Active	Modified By
Edit   Del	Contact_number	Top of Page	Enter a Valid Contact number	✓	Ram Krishnan, 15/12/2018 17:57
Edit   Del	country_code	Top of Page	Enter the Correct Country Code !	✓	Ram Krishnan, 15/12/2018 18:43
Edit   Del	DOB	Top of Page	Rentee must be 18 years or older !!!	✓	Ram Krishnan, 15/12/2018 17:25

### SERVICE WORKER:

Validation Rules					
Action	Rule Name	Error Location	Error Message	Active	Modified By
Edit   Del	Phone_number	Contact_number	Enter a valid 10 digit contact number.	✓	Ram Krishnan, 15/12/2018 20:19

Detailed setup of the validation rules are illustrated in the below figure:

### RENTEE Validation Rule

Validation Rule Detail		<a href="#">Edit</a>	<a href="#">Clone</a>	Active	<input checked="" type="checkbox"/>
Rule Name	Contact_number				
Error Condition Formula	NOT(REGEX(Contact_Number__c, "\d{10}"))				
Error Message	Enter a Valid Contact number			Error Location	Top of Page
Description	Get the valid rentee contact number				
Created By	Ram Krishnan, 15/12/2018 17:57			Modified By	Ram Krishnan, 15/12/2018 17:57
		<a href="#">Edit</a>	<a href="#">Clone</a>		

### RENTEE Validation Rule

Validation Rule Detail		<a href="#">Edit</a>	<a href="#">Clone</a>	Active	<input checked="" type="checkbox"/>
Rule Name	country_code				
Error Condition Formula	OR/ LEN(Country_Code__c) = 1, NOT/ CONTAINS( "AF AX AL DZ AS AD AO AI AQ AG AR AM" & "AW AU AZ BS BH BD BB BY BE BZ BJ BM BT BO" & "BA BW BV BR ID BN BG BF BI KH CM CA CV KY" & "CF TD CL CN CX CC CO KM CG CD CK CR CI HR" & "CU CY CZ DK DJ DM DO EC EG SV GQ ER EE ET FK" & "FO FJ FI FR GF PI TF GA GM GE DE GH GI GR GL" & "GD GP GU GT GG GN GW GY HT HM VA HN HK HU" & "IS IN ID IR IQ IE IM IL IT JM JP JE JO KZ KE KI" & "KP KR KW KG LA LV LB LS LR LY LI LT LU MO MK" & "MG MW MY MV ML MT MH MQ MR MU YT MX FM MD MC" & "MC MN ME MS MA MZ MM MA NR NP NL AN NC NZ NI" & "NE NG NU NF MP NO OM PK PW PS FA PG PY PE PH" & "PN PL PT PR QA RE RO RU RW SH KN LC PM VC WS" & "SM ST SA SN RS SC SL SG SK SI SB SO ZA GS ES" & "LK SD SR SJ SZ SE CH SY TW TJ TZ TH TL TG TK" & "TO TT TN TR TM TC TV UG UA AE GB US UM UY UZ" & "VU VE VN VG VI WF EH YE ZM ZW", Country_Code__c))				
Error Message	Enter the Correct Country Code I			Error Location	Top of Page
Description				Modified By	Ram Krishnan, 15/12/2018 18:43
Created By	Ram Krishnan, 15/12/2018 18:43				
		<a href="#">Edit</a>	<a href="#">Clone</a>		

### RENTEE Validation Rule

Validation Rule Detail		<a href="#">Edit</a>	<a href="#">Clone</a>	Active	<input checked="" type="checkbox"/>
Rule Name	DOB				
Error Condition Formula	DOB__c > DATE(2000,01,01)				
Error Message	Rentee must be 18 years or older !!!			Error Location	Top of Page
Description					
Created By	Ram Krishnan, 15/12/2018 17:25			Modified By	Ram Krishnan, 15/12/2018 17:25
		<a href="#">Edit</a>	<a href="#">Clone</a>		

### SERVICE WORKER Validation Rule

Validation Rule Detail		<a href="#">Edit</a>	<a href="#">Clone</a>	Active	<input checked="" type="checkbox"/>
Rule Name	Phone_number				
Error Condition Formula	LEN(Contact_number__c) <= 10				
Error Message	Enter a valid 10 digit contact number.			Error Location	Contact_number
Description	phone number should be 10 characters.				
Created By	Ram Krishnan, 15/12/2018 20:12			Modified By	Ram Krishnan, 15/12/2018 20:19
		<a href="#">Edit</a>	<a href="#">Clone</a>		

## Formulas used in custom field creation:

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Quick Find / Search... Help for this Page ?

Expand All | Collapse All

**RENT Custom Field**  
**Total Amount**  
Back to RENT

**Custom Field Definition Detail**

**Field Information**

Field Label	Total Amount	Object Name	RENT
Field Name	Total_Amount		
API Name	Total_Amount__c		
Description			
Help Text			
Created By	Ram Krishnan, 15/12/2018 14:30	Modified By	Ram Krishnan, 15/12/2018 20:06

**Formula Options**

Data Type	Formula
Decimal Places	2
E_Bill__c + Monthly_Rent__c + Water_Bill__c	

Total amount field in Rents custom object is formulated to auto populate by the sum of E\_Bill, Monthly\_rent and Water\_bill.

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Quick Find / Search... Help for this Page ?

Expand All | Collapse All

**RENTEE Custom Field**  
**Leasing\_end\_date**  
Back to RENTEE

**Custom Field Definition Detail**

**Field Information**

Field Label	Leasing_end_date	Object Name	RENTEE
Field Name	Leasing_end_date		
API Name	Leasing_end_date__c		
Description	End date of the lease.		
Help Text	Auto populated lease end date.		
Created By	Ram Krishnan, 15/12/2018 19:55	Modified By	Ram Krishnan, 15/12/2018 19:55

**Formula Options**

Data Type	Formula
Leasing_start_date__c + 365	

The leasing\_end\_date field in the rentee custom object is formulated to auto populate as per the leasing\_start\_date selected by the customer in the Rentee details portal.

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Quick Find / Search... Help for this Page ?

Expand All | Collapse All

**REQUEST Custom Field**  
**Service payment**  
Back to REQUEST

**Custom Field Definition Detail**

**Field Information**

Field Label	Service payment	Object Name	REQUEST
Field Name	Service_payment		
API Name	Service_payment__c		
Description	Service payment cost		
Help Text	Service payment cost		
Created By	Ram Krishnan, 16/12/2018 02:21	Modified By	Ram Krishnan, 16/12/2018 02:21

**Formula Options**

Data Type	Formula
Decimal Places	2
CASE(Service_type__c, 'Maintenance', 15, 'Laundry Service', 10, 'Parking space allotment', 30, 'Bike Rentals', 15, 0)	

The Service payment field in the rent custom object is formulated to auto populate as per the pickup option selected in service\_type field by the customer in the Rentee details portal.

## Description of process control features

The tenant initially creates an account with the company's website and receives a confirmation email about the account opening. The tenant then goes into the company's website (Pic of the website has been provided above) where the tenant can view the different tabs such as OWNERS, RENTEES, HOUSES, RENTS, REQUESTS and SERVICE WORKERS. The tenant can then see the due amount to be paid and can request for services such as Laundry, Maintenance, Parking space allotment and Bike Rentals. An automated Email is sent to the tenant which contains the information on the type of service requested and the information about the worker assigned to the service.

## Description of architecture:

**Owners Tab:** Contains the information about the owner.

**RENTEES Tab:** Contains the information of the tenants. It includes the fields Rentee ID, First Name, Last Name, Gender, DOB, Nationality, Address, Contact Number, Email ID and Lease period.

**HOUSES Tab:** Contains the information about the House. It includes the fields House ID, Block Number, Floor Number, House Type and the Rentee ID.

**RENTS Tab:** Contains the information about the pending rent that the tenants has to pay. It includes the fields E-Bill (Electricity bill), Water Bill, Monthly Rent and the Total amount which is the amount that the tenant has to pay.

**REQUESTS Tab:** Contains the information on the service requests made by the tenants. It includes the fields Request ID, Description, Service Type, Creation date, Date Closed and Payment.

**SERVICE WORKERS:** Contains the information on the available workers.

## Description of integration and user interfaces

The screenshot shows the Salesforce Home page for the Winter '19 for Developers release. The top navigation bar includes links for Setup, Help, My Profile, My Settings, Developer Console, Switch to Lightning Experience, Logout, and Rentee. The main content area displays the RENTEEES object. On the left, there's a sidebar with 'Recent Items' showing various records like 'Ram Krishnan' and 'R-0119'. The main feed area shows a recent post from 'Ram Krishnan' dated Sunday 16 December 2018. Below the feed, there's a 'Hide Feed' button, a text input for 'Share an update, @mention someone...', and a 'Share' button. To the right, there's a 'Recommendations' section listing three users: 'Integration User' (joined last week), 'Security User' (joined last week), and 'ramu krishna' (owned by you). At the bottom, there's a 'Recycle Bin' button. On the right side, there's a 'Calendar' section showing 'Today 16/12/2018' with no events scheduled. A calendar for December 2018 is displayed, with the 16th highlighted in blue. The bottom right corner shows various quick access icons.

### Description of approach to building dataset:

Datasets for the custom objects RENTEEES, HOUSES, RENTS, REQUESTS and SERVICE WORKERS are generated using Mockroo and were imported into salesforce using Data import Wizard. 100 rows were generated for RENTEEES, RENTS and REQUESTS and 10 rows were generated for SERVICE WORKERS. The Primary and the Foreign keys were auto populated since they were given as formula while creating the custom fields.

# RENTEE:

Search... [Search](#)

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... [Go!](#)

[Recent Items](#)

- Ram Krishnan
- northfinal
- R-0119
- northwoodnew
- northwood
- R-0118
- R-0117
- R-0111
- R-0110
- R-0109

[Recycle Bin](#)

 Detailed view

View: [Detailed view](#) [Go!](#) [Edit](#) | [Create New View](#)

New RENTEE												Change Owner
Action	Rentee_ID	First_Name	Last_Name	Gender	Leasing_start_date	Leasing_end_date	Contact_Number	Email_ID	Nationality	DOB	Address Line 1	Country Code
<a href="#">Edit</a>   <a href="#">Del</a>	T-0005	Sindhujan	Dhayalan	Male	20/12/2018	20/12/2019	2225556664	sindhujan@gmail.com	Indian	12/12/1993	No 71 block E, Gateway student	IR
<a href="#">Edit</a>   <a href="#">Del</a>	T-0007	Gerek	Rickards	Male	19/08/2018	19/08/2019	9627672626	grickards0@123-reg.co.uk	English	09/10/1996	294 NameKagon Plaza	CN
<a href="#">Edit</a>   <a href="#">Del</a>	T-0008	Lane	Baldock	Male	26/01/2018	26/01/2019	8051294753	lballock1@znet.com	Srilankan	15/01/1996	838 Dayton Drive	CN
<a href="#">Edit</a>   <a href="#">Del</a>	T-0009	Decca	MacCahey	Male	16/01/2018	16/01/2019	6146930447	dmaccahey2@google.com.hk	Australian	27/06/1994	96 Kingsford Terrace	US
<a href="#">Edit</a>   <a href="#">Del</a>	T-0010	Sisile	Blaber	Female	06/07/2018	06/07/2019	5144561000	sblaber3@cio.us	English	01/01/1998	51 Welch Hill	ID
<a href="#">Edit</a>   <a href="#">Del</a>	T-0011	Dita	Bartod	Female	07/01/2018	07/01/2019	1585068622	dbartod4@nps.gov	Chinese	17/06/1992	2269 Mallard Alley	ID
<a href="#">Edit</a>   <a href="#">Del</a>	T-0012	Somerset	Michin	Male	20/12/2017	20/12/2018	9359682743	smichin5@mac.com	Chinese	15/11/1996	8143 Oxford Drive	AR
<a href="#">Edit</a>   <a href="#">Del</a>	T-0013	Penelopa	Roswarne	Female	26/11/2018	26/11/2019	2563454577	proswarne6@hibu.com	Indian	02/09/1997	89 Emmet Road	BR
<a href="#">Edit</a>   <a href="#">Del</a>	T-0014	Neili	Marton	Female	20/02/2018	20/02/2019	2653253743	nmarton7@time.com	Srilankan	23/05/1993	8898 Fulton Circle	CN
<a href="#">Edit</a>   <a href="#">Del</a>	T-0015	Billie	Holworth	Female	22/11/2018	22/11/2019	5107880193	bholworth8@tamu.edu	Australian	25/10/1992	96 Bluestem Circle	PH
<a href="#">Edit</a>   <a href="#">Del</a>	T-0016	Emile	Szachniewicz	Male	13/01/2018	13/01/2019	8357295868	eszachniewicz9@hibu.com	Indian	12/08/1993	57 Fair Oaks Street	PL
<a href="#">Edit</a>   <a href="#">Del</a>	T-0017	Fairfax	Ivanchov	Male	15/06/2018	15/06/2019	9831428910	fvanchova@yahoo.co.jp	Srilankan	21/03/1998	79 Huxley Junction	AZ
<a href="#">Edit</a>   <a href="#">Del</a>	T-0018	Darcee	Rallings	Female	25/01/2018	25/01/2019	4191021618	drallingsb@godaddy.com	Irish	19/07/1991	9314 Sutteridge Alley	PT
<a href="#">Edit</a>   <a href="#">Del</a>	T-0019	Gene	Insworth	Female	29/03/2018	29/03/2019	6473303069	ginsworthc@google.pl	Indian	15/02/1992	22 Hooker Street	DE
<a href="#">Edit</a>   <a href="#">Del</a>	T-0020	Ignace	Benkin	Male	13/04/2018	13/04/2019	9421229284	ibenkind@sphinn.com	Indian	05/03/1991	1560 Gulseth Avenue	VE
<a href="#">Edit</a>   <a href="#">Del</a>	T-0021	Symon	Karczynski	Male	02/11/2018	02/11/2019	1789483439	skarczynkie@prnewswire.com	Australian	17/08/1992	6 Towne Plaza	PE
<a href="#">Edit</a>   <a href="#">Del</a>	T-0022	Allie	Salery	Female	17/03/2018	17/03/2019	9493541669	asaleryf@reference.com	Srilankan	24/09/1995	81836 Doe Crossing Avenue	PH
<a href="#">Edit</a>   <a href="#">Del</a>	T-0023	Kerr	Licas	Male	07/07/2018	07/07/2019	1588303344	klicasg@nasa.gov	English	09/01/1992	736 Acker Park	ID
<a href="#">Edit</a>   <a href="#">Del</a>	T-0024	Nichole	Casson	Female	17/01/2018	17/01/2019	3987687835	ncassonh@hp.com	Srilankan	20/10/1995	0254 Porter Plaza	RU

Search... [Search](#)

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... [Go!](#)

[Recent Items](#)

- Ram Krishnan
- northfinal
- R-0119
- northwoodnew
- northwood
- R-0118
- R-0117
- R-0111
- R-0110

[Recycle Bin](#)

 **RENTEE** T-0010

[Back to List: RENTEES](#)

**RENTEE Detail**

<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Clone</a>
Owner: Ram Krishnan [Change]		
Rentee_ID	T-0010	
First_Name	Sisile	
Last_Name	Blaber	
Gender	Female	
DOB	01/01/1998	
Nationality	English	
Address Line 1	51 Welch Hill	
Address Line 2	76878 Aberg Drive	
Country Code	ID	
Contact_Number	5144561000	
Email_ID	sblaber3@cio.us	
Leasing_start_date	06/07/2018	
Leasing_end_date	06/07/2019	
Owner name		
Created By	Ram Krishnan, 16/12/2018 02:59	

Last Modified By: Ram Krishnan, 16/12/2018 02:59

[Edit](#) [Delete](#) [Clone](#)

 **HOUSES** [New HOUSE](#)

Action House\_ID Edit | Del H-0108

 **REQUESTS** [New REQUEST](#)

No records to display

HOUSES Help ? REQUESTS Help ?

# HOUSES:

Search...

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New...  Recent Items

T-0010 Ram Krishnan northfinal R-0119 northwoodnew R-0118 R-0117 R-0111 R-0110

Recycle Bin

**Detailed view**

View:   Edit | Create New View

Action	House_ID	Block_number	Floor_number	House_type	Rent_ID	Rentee_ID
<input type="checkbox"/>   Edit   Del	H-0103	3	1	2 BEDROOM, HALL & KITCHEN.	R-0001	T-0005
<input type="checkbox"/>   Edit   Del	H-0104	2	2	1 BEDROOM, HALL & KITCHEN.	R-0002	
<input type="checkbox"/>   Edit   Del	H-0105	2	2	2 BEDROOM, HALL & KITCHEN.	R-0003	T-0007
<input type="checkbox"/>   Edit   Del	H-0106	3	3	3 BEDROOM, HALL & KITCHEN.	R-0004	T-0008
<input type="checkbox"/>   Edit   Del	H-0107	2	1	1 3 BEDROOM, HALL & KITCHEN.	R-0005	T-0009
<input type="checkbox"/>   Edit   Del	H-0108	1	3	1 BEDROOM, HALL & KITCHEN.	R-0006	T-0010
<input type="checkbox"/>   Edit   Del	H-0109	2	1	1 BEDROOM, HALL & KITCHEN.	R-0007	T-0011
<input type="checkbox"/>   Edit   Del	H-0110	1	1	3 BEDROOM, HALL & KITCHEN.	R-0008	T-0012
<input type="checkbox"/>   Edit   Del	H-0111	1	3	2 BEDROOM, HALL & KITCHEN.	R-0009	T-0013
<input type="checkbox"/>   Edit   Del	H-0112	2	4	3 BEDROOM, HALL & KITCHEN.	R-0010	T-0014
<input type="checkbox"/>   Edit   Del	H-0113	1	4	3 BEDROOM, HALL & KITCHEN.	R-0011	T-0015
<input type="checkbox"/>   Edit   Del	H-0114	1	1	3 BEDROOM, HALL & KITCHEN.	R-0012	T-0016
<input type="checkbox"/>   Edit   Del	H-0115	3	2	3 BEDROOM, HALL & KITCHEN.	R-0013	T-0017
<input type="checkbox"/>   Edit   Del	H-0116	3	3	2 BEDROOM, HALL & KITCHEN.	R-0014	T-0018
<input type="checkbox"/>   Edit   Del	H-0117	4	3	3 BEDROOM, HALL & KITCHEN.	R-0015	T-0019
<input type="checkbox"/>   Edit   Del	H-0118	1	4	2 BEDROOM, HALL & KITCHEN.	R-0016	T-0020
<input type="checkbox"/>   Edit   Del	H-0119	3	3	2 BEDROOM, HALL & KITCHEN.	R-0017	T-0021
<input type="checkbox"/>   Edit   Del	H-0120	3	3	2 BEDROOM, HALL & KITCHEN.	R-0018	T-0022
<input type="checkbox"/>   Edit   Del	H-0121	3	3	2 BEDROOM, HALL & KITCHEN.	R-0019	T-0023
<input type="checkbox"/>   Edit   Del	H-0122	4	3	1 BEDROOM, HALL & KITCHEN.	R-0020	T-0024
<input type="checkbox"/>   Edit   Del	H-0123	2	2	2 BEDROOM, HALL & KITCHEN.	R-0021	T-0025

Search...

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New...  Recent Items

H-0105 Ram Krishnan northfinal R-0119 northwoodnew R-0118 R-0117 R-0111 R-0110

Recycle Bin

**HOUSE Detail**

Back to List: HOUSES

House\_ID: H-0105

Block\_number: 2

Floor\_number: 2

Rent\_ID: R-0003

House\_type: 2 BEDROOM, HALL & KITCHEN.

Rentee\_ID: T-0007

Created By: Ram Krishnan, 16/12/2018 14:38

Last Modified By: Ram Krishnan, 16/12/2018 14:51

Owner: Ram Krishnan [Change]

**Open Activities**   Open Activities Help ?

No records to display

**Activity History**    Activity History Help ?

No records to display

Always show me ▾ more records per related list

## RENTS:

Search... Search

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee ▾ Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... ▾ Go!

**Detailed view**

View: Detailed view ▾ Go! Edit | Create New View

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Action	RENT_ID	E_Bill	Monthly_Rent	Water_Bill	Total Amount
<a href="#">Edit</a>   <a href="#">Del</a>	R-0001	€20	€50	€30	€100.00
<a href="#">Edit</a>   <a href="#">Del</a>	R-0002	€11	€59	€30	€99.68
<a href="#">Edit</a>   <a href="#">Del</a>	R-0003	€47	€52	€19	€118.16
<a href="#">Edit</a>   <a href="#">Del</a>	R-0004	€30	€56	€44	€130.04
<a href="#">Edit</a>   <a href="#">Del</a>	R-0005	€21	€53	€22	€96.48
<a href="#">Edit</a>   <a href="#">Del</a>	R-0006	€14	€59	€26	€98.47
<a href="#">Edit</a>   <a href="#">Del</a>	R-0007	€30	€52	€21	€103.92
<a href="#">Edit</a>   <a href="#">Del</a>	R-0008	€27	€51	€26	€104.04
<a href="#">Edit</a>   <a href="#">Del</a>	R-0009	€18	€59	€40	€116.52
<a href="#">Edit</a>   <a href="#">Del</a>	R-0010	€19	€57	€14	€89.91
<a href="#">Edit</a>   <a href="#">Del</a>	R-0011	€24	€56	€16	€96.12
<a href="#">Edit</a>   <a href="#">Del</a>	R-0012	€37	€54	€42	€134.22
<a href="#">Edit</a>   <a href="#">Del</a>	R-0013	€38	€52	€33	€123.78
<a href="#">Edit</a>   <a href="#">Del</a>	R-0014	€11	€53	€20	€84.01
<a href="#">Edit</a>   <a href="#">Del</a>	R-0015	€20	€58	€43	€121.00
<a href="#">Edit</a>   <a href="#">Del</a>	R-0016	€30	€56	€38	€123.50
<a href="#">Edit</a>   <a href="#">Del</a>	R-0017	€16	€53	€37	€105.74
<a href="#">Edit</a>   <a href="#">Del</a>	R-0018	€49	€53	€10	€112.02
<a href="#">Edit</a>   <a href="#">Del</a>	R-0019	€12	€50	€14	€76.22
<a href="#">Edit</a>   <a href="#">Del</a>	R-0020	€24	€51	€46	€121.07

Search... Search

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee ▾ Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... ▾ Go!

**RENT R-0009**

◀ Back to List: RENTS

**RENT Detail**

RENT_ID	R-0009
E_Bill	€18
Water_Bill	€40
Monthly_Rent	€59
Total Amount	€116.52
Created By	Ram Krishnan 15/12/2018 22:35

Owner Ram Krishnan [Change]

Last Modified By Ram Krishnan 15/12/2018 22:35

[Edit](#) [Delete](#) [Clone](#)

[Edit](#) [Delete](#) [Clone](#)

**Open Activities**

New Task New Event Open Activities Help ?

No records to display

**Activity History**

Log a Call Mail Merge Send an Email Activity History Help ?

No records to display

**HOUSES**

New HOUSE

HOUSES Help ?

Action	House_ID
<a href="#">Edit</a>   <a href="#">Del</a>	H-0111

# REQUESTS:

Search...

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New...

**Detailed view**

Printable View | Help for this Page ?

Recent Items

- R-0121
- R-0009
- H-0105
- R-0120
- T-0010
- Ram Krishnan
- northfinal
- R-0119
- northwoodnew
- northwood

Recycle Bin

Action	Rentee_ID	Request_ID	Description	Creation date.	Service type	Worker_ID	Service payment
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0005	R-0050	Parking space allotment	04/12/2018	Parking space allotment	W-0006	€30.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0005	R-0114	NEwDD	16/12/2018	Maintenance	W-0009	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0005	R-0115	Repair work	16/12/2018	Maintenance	W-0011	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0005	R-0119	Bike needed	16/12/2018	Bike Rentals	W-0002	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0007	R-0060	Maintenance	04/12/2018	Maintenance	W-0006	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0008	R-0024	Bike Rentals	04/12/2018	Bike Rentals	W-0009	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0009	R-0051	Bike Rentals	11/12/2018	Bike Rentals	W-0004	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0009	R-0071	Parking space allotment	11/12/2018	Parking space allotment	W-0010	€30.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0011	R-0041	Maintenance	06/12/2018	Maintenance	W-0005	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0012	R-0025	Parking space allotment	09/12/2018	Parking space allotment	W-0005	€30.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0015	R-0026	Bike Rentals	04/12/2018	Bike Rentals	W-0002	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0017	R-0049	Maintenance	05/12/2018	Maintenance	W-0003	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0018	R-0034	Parking space allotment	09/12/2018	Parking space allotment	W-0003	€30.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0019	R-0083	Bike Rentals	13/12/2018	Bike Rentals	W-0010	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0020	R-0013	Bike Rentals	13/12/2018	Bike Rentals	W-0003	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0020	R-0057	Parking space allotment	05/12/2018	Parking space allotment	W-0010	€30.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0020	R-0082	Maintenance	13/12/2018	Maintenance	W-0004	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0020	R-0107	Maintenance	11/12/2018	Maintenance	W-0005	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0020	R-0108	Maintenance	12/12/2018	Maintenance	W-0006	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0021	R-0014	Maintenance	12/12/2018	Maintenance	W-0004	€15.00
<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Del"/>	T-0022	R-0055	Maintenance	05/12/2018	Maintenance	W-0005	€15.00

Search...

Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New...

**RENTEE Detail**

Customize Page | Edit Layout | Printable View | Help for this Page ?

Rentee\_ID: T-0009  
First\_Name: Decca  
Last\_Name: MacCahey  
Gender: Male  
DOB: 27/06/1994  
Nationality: Australian  
Address Line 1: 96 Kingsford Terrace  
Address Line 2: 051 Muir Court  
Country Code: US  
Contact\_Number: 6146930447  
Email\_ID: dmaccaye2@google.com.hk  
Leasing\_start\_date: 16/01/2018  
Leasing\_end\_date: 16/01/2019  
Owner name: Ram Krishnan  
Created By: Ram Krishnan 16/12/2018 02:59  
Last Modified By: Ram Krishnan 16/12/2018 02:59

**HOUSES**

Action House\_ID: H-0107

**REQUESTS**

Action Request\_ID: R-0051

HOUSES Help ? REQUESTS Help ?

# SERVICE WORKERS:

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... Go!

**Detailed view**

View: Detailed view Go! Edit | Create New View

New SERVICE WORKER Change Owner

Action	Worker_ID	Wages	Contact_number	Worker_name	OWNER
[Edit] [Del]	W-0002	€100	5501709992	Pattin Fowlds	Ram Krishnan
[Edit] [Del]	W-0003	€150	5046685167	Isobel Longley	Ram Krishnan
[Edit] [Del]	W-0004	€200	8539382200	Johnette Corcoran	Ram Krishnan
[Edit] [Del]	W-0005	€200	8235811514	Denver Reville	Ram Krishnan
[Edit] [Del]	W-0006	€100	6151945946	Ingaberg Delimage	Ram Krishnan
[Edit] [Del]	W-0007	€150	3916223179	Marvin Traviss	Ram Krishnan
[Edit] [Del]	W-0008	€150	6556453405	Livy Sebrook	Ram Krishnan
[Edit] [Del]	W-0009	€150	3588743081	Doti Marlow	Ram Krishnan
[Edit] [Del]	W-0010	€200	4529983757	Lloyd Jozefiak	Ram Krishnan
[Edit] [Del]	W-0011	€200	3556248107	Arielle Pollitt	Ram Krishnan

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Search... Search Setup Help My Profile My Settings Developer Console Switch to Lightning Experience Logout Rentee Go!

Home HOUSES RENTEES SERVICE TYPES REQUESTS RENTS +

Create New... Go!

**SERVICE WORKER**  
W-0005  
« Back to List: SERVICE WORKERS

**SERVICE WORKER Detail**

Worker\_ID: W-0005 Contact\_number: 8235811514 Owner: Ram Krishnan [Change]  
 Wages: €200 OWNER: Ram Krishnan  
 Worker\_name: Denver Reville Last Modified By: Ram Krishnan, 16/12/2018 01:11  
 Created By: Ram Krishnan, 16/12/2018 01:03

**Open Activities** New Task New Event Open Activities Help ?

No records to display

**Activity History** Log a Call Mail Merge Send an Email Activity History Help ?

No records to display

**REQUESTS** New REQUEST REQUESTS Help ?

Action	Request_ID
Edit   Del	R-0015
Edit   Del	R-0025
Edit   Del	R-0030
Edit   Del	R-0041
Edit   Del	R-0044

## SERVICE TYPES:

Service\_types

Action	Service_ID	Service_type	Payment
<a href="#">Edit</a>	S-0006	Maintenance	€15.00
<a href="#">Edit</a>	S-0007	Laundry Service	€10.00
<a href="#">Edit</a>	S-0008	Parking space allotment	€30.00
<a href="#">Edit</a>	S-0009	Bike Rentals	€15.00
			A   B   C   D   E   F   G   H   I   J   K   L   M   N   O   P   Q   R   S   T   U   V   W   X   Y   Z   Other

SERVICE TYPE  
S-0008

[Edit](#) [Delete](#) [Clone](#)

Owner: Ram Krishnan [Change]

Service\_ID: S-0008  
Service\_type: Parking space allotment  
Payment: €30.00  
Created By: Ram Krishnan, 15/12/2018 22:07  
Last Modified By: Ram Krishnan, 15/12/2018 22:07

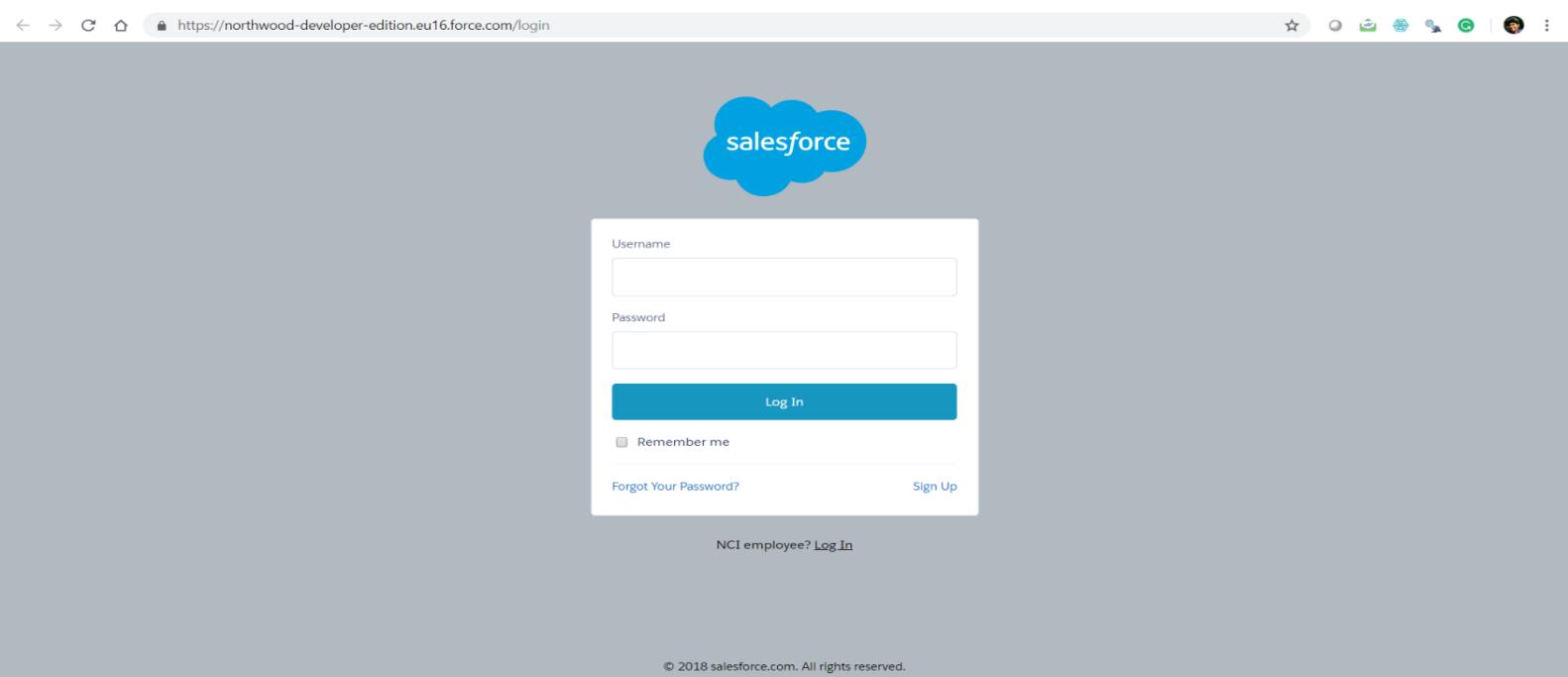
[Edit](#) [Delete](#) [Clone](#)

[New Task](#) [New Event](#)

[Log a Call](#) [Mail Merge](#) [Send an Email](#)

## Description of steps taken to build system:

Initially, the custom objects were created inside which the custom fields were created which includes the primary key for each object and the foreign key referenced from the other objects. Validation rules were created inside each of the objects. Webpages were created using visual force which were coded using APEX. Screenshots of the webpages are given below,



Initial webpage is created where the tenant can create a profile where they can view different tabs containing the information on rent due, types of services, different workers available.

A screenshot of a registration page titled "Northwood". It features a form with fields for "First Name", "Last Name", "Nickname", "Email", "Password", and "Confirm Password", followed by a "Submit" button. At the bottom of the page, there's a copyright notice: "Copyright © 2000-2018 salesforce.com, Inc. All rights reserved. | Privacy Statement | Security Statement | Terms of Use". The URL in the address bar is https://northwood-developer-edition.eu16.force.com/CommunitiesSelfReg.

Once the tenant signs up, they receive an automated email as illustrated in the below figures:

The screenshot shows a Gmail inbox with 40,132 messages. A new email from "Northwood" is selected, titled "Welcome to Northwood". The message content is as follows:

**Northwood** salesforceprojectteams@gmail.com via 9sfzd8bcd3gajz.1t-u7rzeai.eu16.bnc.salesforce.com  
to me ▾  
Hi ramu,  
Welcome to Northwood! To get started, go to [https://northwood-developer-edition.eu16.force.com/login?c=aoAPllgzSzBhOwGZOEssycwcvYRleDh7Ry0pj29gWqC3DWq7SiV8k\\_GLdeZ80JaT1JlPRlKnErPpA4GDbJCivklsNsZjtDd9\\_HthgaxmisMFbm1jgfV42BH23CGC5kqQyJLmhnAYj51J7qgJPkrSVCaF\\_spW8Tud1s\\_VB\\_EWJxHb\\_tl8KRSeJ6mZBrJQrvANYrwpu2](https://northwood-developer-edition.eu16.force.com/login?c=aoAPllgzSzBhOwGZOEssycwcvYRleDh7Ry0pj29gWqC3DWq7SiV8k_GLdeZ80JaT1JlPRlKnErPpA4GDbJCivklsNsZjtDd9_HthgaxmisMFbm1jgfV42BH23CGC5kqQyJLmhnAYj51J7qgJPkrSVCaF_spW8Tud1s_VB_EWJxHb_tl8KRSeJ6mZBrJQrvANYrwpu2)  
Username: [rkaushik1994@gmail.com](#)  
Thanks,  
NCI

The below figure illustrates the rentee's portal created using visual force page in salesforce.

The screenshot shows a Visualforce page titled "Rentee's Portal". The page has a header "Personal Details" and contains the following form fields:

Field	Value
First_Name	pavan
Last_Name	Siang
Gender	Female
DOB	04/07/1994 [ 16/12/2018 ]
Nationality	Chinese
Address Line 1	No18, Lakshmi narayana flats,
Address Line 2	No18, Lakshmi narayana flats,
Country Code	23
Contact_Number	2323342333
Email_ID	pavansiang@gmail.com
Leasing_start_date	14/12/2018 [ 16/12/2018 ]
Owner name	Ram Krishnar

A "SUBMIT" button is located at the bottom right of the form.

The below figure illustrates the validation error of fields in rentee portal:

Error:  
Gender: You must enter a value

### Rentee's Portal

Personal Details

First_Name	pavan
Last_Name	Siang
Gender	Male
DOB	04/07/1994 [ 16/12/2018 ]
Nationality	Chinese
Address Line 1	No18, Lakshmi narayana flats,
Address Line 2	No18, Lakshmi narayana flats,
Country Code	23
Contact_Number	2323342333
Email_ID	pavansiang@gmail.com
Leasing_start_date	14/12/2018 [ 16/12/2018 ]
Owner name	Ram Krishnan

**SUBMIT**

Once the customer submits the details successfully, the below mail is sent to the customer as a notification for the registration made.

https://mail.google.com/mail/u/0/#spam/FMfcgxwBTjtDtqXdNCplKQmxmBBbNKIZ

Gmail in:spam

Compose

Spam 110

Hi Kaushik,

Welcome to Northwood Housing Society! , Your Rentee ID is T-0117. Your lease starting date is 14/12/2018 and ending date is 14/12/2019. Enjoy your stay!! Contact me on email for any queries.

Thanks,  
Ram Krishnan  
Northwood housing society

Report not spam

7:17 PM (0 minutes ago)

Reply Forward

The below figure illustrates the Service request portal where the customer raise the service request.

A screenshot of a web browser displaying a service request portal. The URL is https://c.eu16.visual.force.com/apex/Customer\_Service\_Request. The page title is "SERVICE REQUEST PORTAL". A red header bar contains the text "Enter the details". Below this, there are several input fields: "Owner" (User), "Description" (empty), "Worker\_ID" (empty), "Service type" (--None--), "Date\_closed" (16/12/2018), "Rentee\_ID" (empty), and "Creation date." (16/12/2018). At the bottom right are "Raise request" and "Cancel" buttons. The browser's address bar shows the full URL, and the top right corner has standard browser icons.

The below figure illustrates the validation error of fields in service request portal:

A screenshot of a web browser displaying a service request portal. The URL is https://c.eu16.visual.force.com/apex/Customer\_Service\_Request. The page title is "Customer\_Service\_Request". A yellow header bar contains the text "View State". A red box highlights the "Errors" section. Inside, there is a list of validation errors: "Date\_closed: Invalid Date", "Rentee\_ID: No matches found.", and "Creation date.: Invalid Date". Below this, the "Enter the details" form is shown with the following data: "Owner" (User) set to "Ram Krishnan", "Description" (laundry), "Worker\_ID" (W-0009), "Service type" (Maintenance), "Date\_closed" (20/20/2020) with an error message "Error: Invalid Date", "Rentee\_ID" (234234) with an error message "Error: No matches found.", and "Creation date." (21/21/2021) with an error message "Error: Invalid Date". The browser's address bar shows the full URL, and the top right corner has standard browser icons.

Lookup option pops up when the tenant wants to put in their Rentee ID, where they can select their rentee ID from the popup.

The screenshot shows the Service Request Portal interface. On the left, there is a form with fields for Owner (User Ram Krishnan), Description (laundry), Worker\_ID (W-0009), Service type (None), Date\_closed (04/12/2018 [ 16/12/2018 ]), Rentee\_ID (highlighted with a yellow box), and Creation date (11/12/2018 [ 16/12/2018 ]). A cursor points to the Rentee\_ID field. On the right, a 'Lookup' dialog box is open, showing a list of recently viewed Rentee IDs: T-0116, T-0005, T-0014, T-0069, T-0098, T-0065, T-0027, T-0066, T-0043, T-0034, T-0018, T-0079, and T-0078. The Rentee\_ID field in the main form has a magnifying glass icon next to it, indicating it is a lookup field.

After the request has been made, an automated email is sent to the tenant with the information about the type of service that they have selected and the worker assigned for the work. Screenshot of the automated email is given below,

The screenshot shows an email inbox with one new message. The subject of the email is "Service request created-Request ID:R-0121" and it is in the "Inbox". The email is from "Ram Krishnan via alab37y003tu.1t-u7rzej.eu16.bnc.salesforce.com" and is addressed "to me". The body of the email contains the following text:

The request for service type: Laundry Service has been raised on 16/12/2018.  
Please find the service details below:  
Request ID: R-0121  
Assigned to the available worker ID: W-0010  
Description: laundry  
Payment: €10.00

The assigned worker will try to complete the service within the next 24 hours. We will update on the same before ETA, Have a nice day!

Regards,  
Northwood housing society team.

At the bottom of the email are two buttons: "Reply" and "Forward".

# Visualforce Code for the webpage:

## Code to create Renter's Portal:

Visualforce Markup Version Settings

```
<apex:page standardController="RENTEE__c" showheader="False">
<apex:pagemessages></apex:pagemessages>
<apex:stylesheet value="http://netdna.bootstrapcdn.com/twitter-bootstrap/2.3.2/css/bootstrap-combined.min.css"/>
<apex:includeScript value="https://ajax.googleapis.com/ajax/libs/jquery/1.8.3/jquery.min.js" />
<apex:includeScript value="http://netdna.bootstrapcdn.com/twitter-bootstrap/2.3.2/js/bootstrap.min.js"/>
<apex:form>
    <apex:pageBlock>
        <div align="Center">
            <apex:outputText value="Renter's Portal" style="font-weight: bold;font-size:26px; color:red; "/><br/>
        </div>
        <apex:pageBlockSection showHeader="true" title="Personal Details" columns="1">
            <apex:inputField value="(!RENTEE__c.First_Name__c)" style="width:300px;height:20px;" Required="False"/>
            <apex:inputField value="(!RENTEE__c.Last_Name__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Gender__c)" Required="True"/>
            <apex:inputField value="(!RENTEE__c.DOB__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Nationality__c)" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Address_Line_1__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Address_Line_2__c)" style="width:300px;height:20px;" Required="False"/>
            <apex:inputField value="(!RENTEE__c.Country_Code__c)" style="width:300px;height:20px;" Required="False"/>
            <apex:inputField value="(!RENTEE__c.Contact_Number__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Email_ID__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Leasing_start_date__c)" style="width:300px;height:20px;" Required="True"/>
            <apex:inputField value="(!RENTEE__c.Owner_name__c)" style="width:300px;height:20px;" Required="True"/>
        </apex:pageBlockSection>
        <div align="center">
            <apex:commandbutton value="SUBMIT" action="!save" />
        </div>
    </apex:pageBlock>
</apex:form>
</apex:page>
```

## Code to create service request portal:

Visualforce Markup Version Settings

```
<apex:page standardController="REQUEST__c" showheader="False">
<apex:pagemessages></apex:pagemessages>
<apex:stylesheet value="http://netdna.bootstrapcdn.com/twitter-bootstrap/2.3.2/css/bootstrap-combined.min.css"/>
<apex:includeScript value="https://ajax.googleapis.com/ajax/libs/jquery/1.8.3/jquery.min.js" />
<apex:includeScript value="http://netdna.bootstrapcdn.com/twitter-bootstrap/2.3.2/js/bootstrap.min.js"/>
<apex:form>
    <apex:pageBlock title="SERVICE REQUEST PORTAL" mode="detail" >
        <font color="#ff0000">
            <apex:facet name="header">
                <span style="font-size:26px ; color:black; font-weight: bold">SERVICE REQUEST PORTAL</span>
            </apex:facet>
        </font>

        <div align="Center">
            <apex:pageBlockButtons location="bottom">
                <apex:commandButton value="Raise request" action="!save" />
                <apex:commandButton value="Cancel" action="!cancel" />
            </apex:pageBlockButtons>
        </div>
        <apex:pageBlockSection title="Enter the details" columns="2">
            <div align="Center">
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.OwnerId)" required="false"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Description__c)" required="false"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Worker_ID__c)" required="true"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Service_type__c)" required="true"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Date_closed__c)" required="false"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Rentee_ID__c)" required="false"/>
                <apex:pageBlockSectionItem />
                <apex:inputField value="(!REQUEST__c.Creation_date__c)" required="false"/>
            </div>
        </apex:pageBlockSection>
    </apex:pageBlock>
</apex:form>
</apex:page>
```

## Reports & Dashboard:

Reports are created using the readily available report app in salesforce. In this case, three reports are created using the data captured from portal pages entered by the customers(Rentee).

The customized reports created in salesforce are illustrated in the below figure:

The screenshot shows the Salesforce 'Content' tab with the 'Reports' section selected. Under 'Private Reports', there are three items listed: 'Rentee-nationality-Analysis', 'Service payment analysis', and 'Service type report'. Each item has columns for Report Name, Description, Folder, Created By, Created On, and Subscribed status. A search bar, 'New Report', and 'New Folder' buttons are also visible.

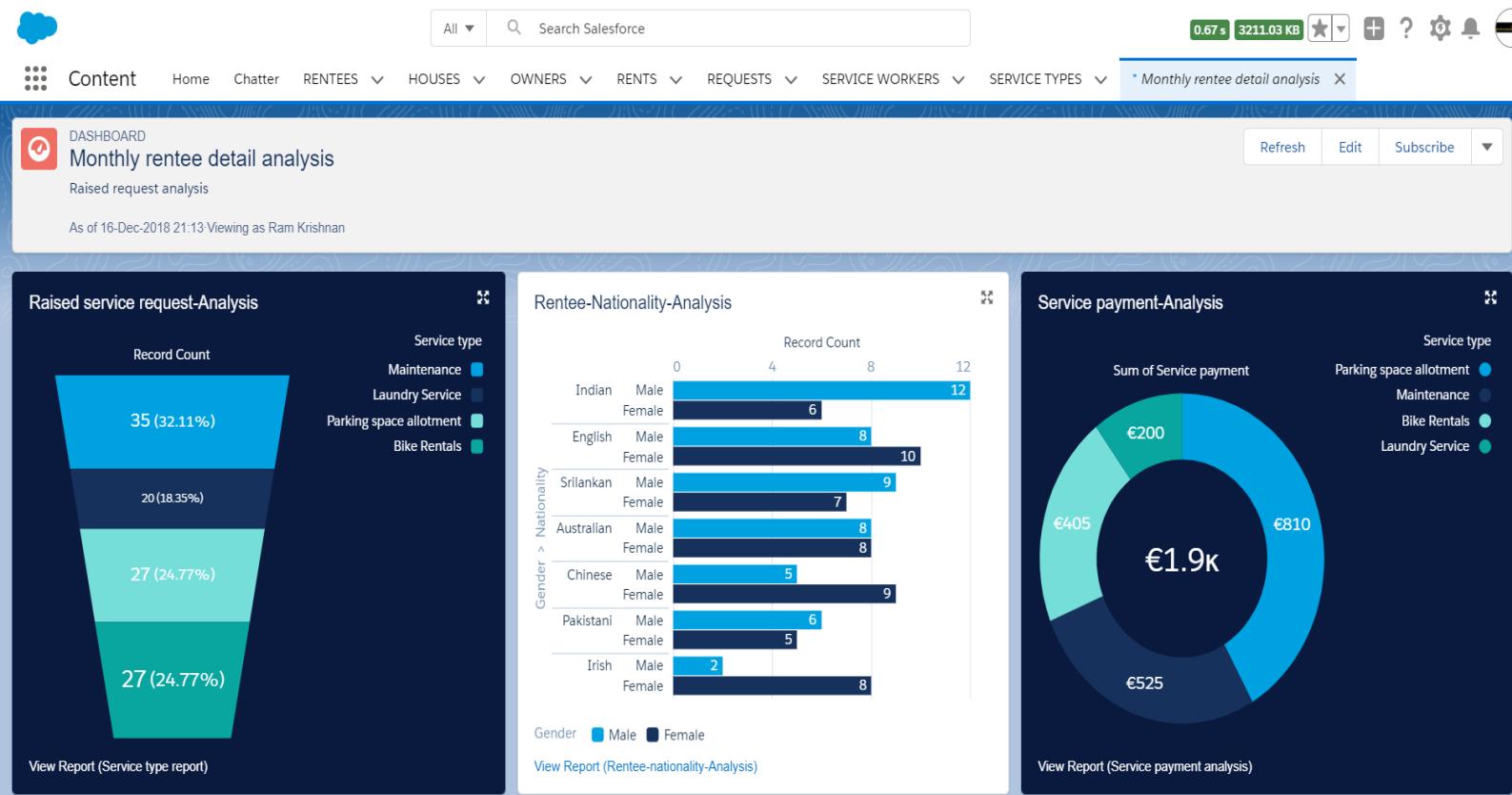
REPORTS	REPORT NAME	DESCRIPTION	FOLDER	CREATED BY	CREATED ON	SUBSCRIBED
Recent	Rentee-nationality-Analysis	Analysis of nationality of rentee...	Private Reports	Ram Krishnan	16/12/2018, 20:47	
Created by Me	Service payment analysis	Service payment analysis	Private Reports	Ram Krishnan	16/12/2018, 21:07	
Private Reports	Service type report	Service type report	Private Reports	Ram Krishnan	16/12/2018, 20:10	

The records inside the reports are illustrated in the below figure:

The three reports are displayed as follows:

- Service payment analysis:** Shows a total service payment of €1,940.00. The table lists service type (Maintenance) and service payment sum, both consistently showing €15.00.
- Rentee-nationality-Analysis:** Shows 103 total records. It details nationality (Indian, 18 records), gender (Male, 12 records), and rentee IDs (T-0005 through T-0095). There are also 6 female records (Female, 6 records) listed.
- Service type report:** Shows a list of request IDs (REQUEST\_ID) corresponding to service types. The list includes R-0106, R-0107, R-0108, R-0109, R-0111, R-0112, R-0120, R-0115, R-0114, R-0014, R-0019, R-0021, R-0023, R-0027, R-0029, R-0035, R-0040, R-0041, and R-0044.

Dash board view of the three reports generated is displayed in below figure. The dashboard is created using the readily available dashboard app in salesforce.



The report one: Raised service request-Analysis compares the number of request raised by the customers in the community in a month.

The report two: Renter-Nationality-Analysis compares the gender and nationality of the customers living in the community in a month.

The report three: Service Payment-Analysis displays the amount generated by all the different services provided to the customer in a month.

Analysis of the reports in the dashboard can be used to derive business insights to improve and enhance the services and financial market of the community.