

Service Information Management  
Application WareHouse  
Final Case Report

-Shashank M

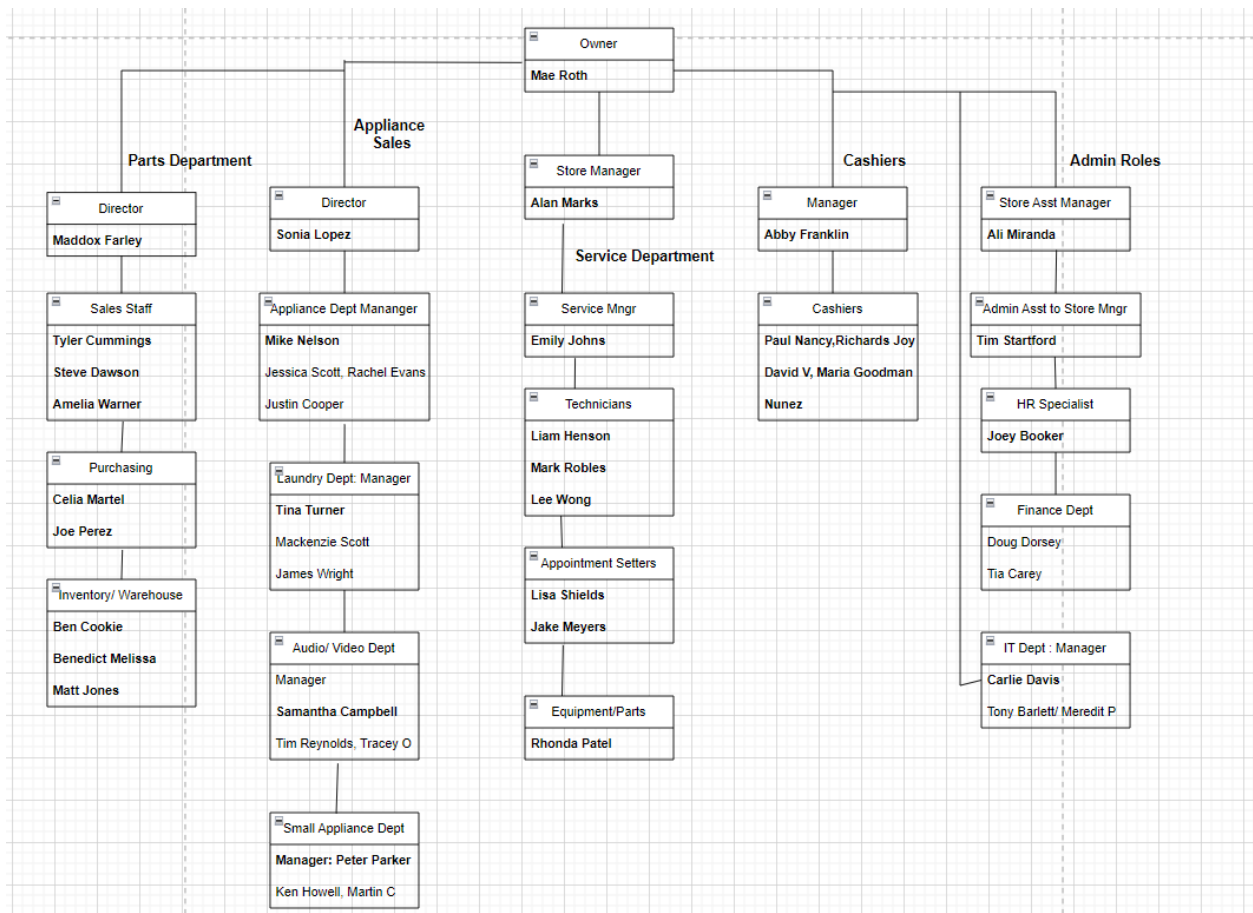
## Index

Changes made are in *purple*.

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## Organizational Chart :

Made changes to ORG Chart, and updated with all teams, staff.



## SWOT Analysis:

**SWOT** stands for Strengths, Weaknesses, Opportunities, and Threats, and so a SWOT analysis is a technique for assessing these four aspects of your business. SWOT Analysis is a tool that can help you to analyze what your company does best now, and to devise a successful strategy for the future.

Looking at the Warehouse case, Strengths and Weaknesses are mostly internal like faulty system error, or a malfunction or inventory fault. And we can also change our team/staff with properties. When it comes to Opportunities or Threats it is the opposite, they are quite external. Examples include, competitors, price of products(raw), and rate of customers shopping trends

By analyzing the Warehouse Website.

**S:** Branded site, 5 -star service, faster delivery speeds, low priced products.

**W:** Issues with the website, not strong mission statement, not enough browsing/pages to see.

**O:** Can generate revenue with the services with the home appliance parts, and user friendly UI to seem user friendly to customers who use the website. Creating 2 services departments as it said in the email to generate products/services. We can add more pages to website like Contact US Page to get feedback from customers, add appointment setters, technicians page so they can explore. We can add a delivery packaging system and tracking system so the customers know where their package is, and when it will arrive.

**T:** There are rival companies who may pay more, better products with reviews and all these factors to consider. Not enough salary for the workers because of competitive hire from rival companies that pay higher with well reputed businesses, demanding hours due to rising product lines etc.

### **Mission Statement :**

AW's Mission Statements states "Our Mission, We are your one stop shop for your home appliances and parts".

My honest opinion is it does look good in a certain way, but it does not catch the reader's attention, more like it doesn't act like a hook when reading an essay. For example Nordstorm mission statement states "To give customers the most compelling shopping experience possible", it gives out positive vibes, the fix would be appealing to customers with warmth and in a pleasing way would do a lot of better. The previous statement says we are a stop for shop for your parts, but that's all it says. To fix the statement from the original would be better as " Our Mission, to provide safe, secure, comfortable, reliable home appliances, so we are a part of your family. We are a value, feedback driven business running to believe in strong and homecoming familial bonds. ".

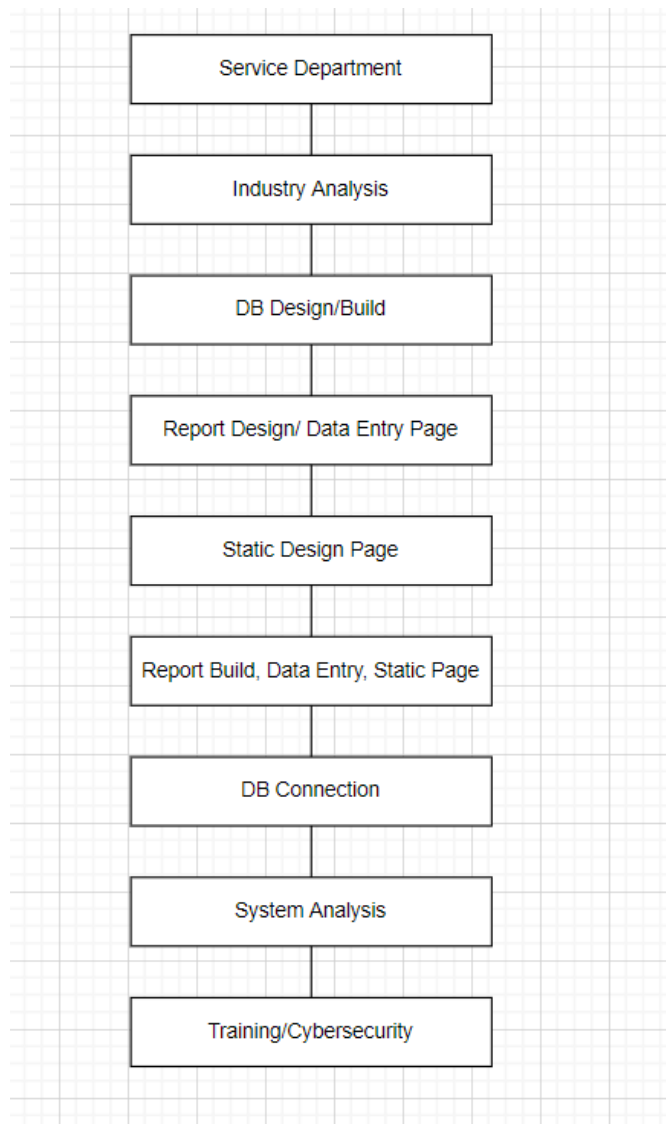
### Opportunity Statement:

**Current State:** Mae has decided to implement two departments to generate revenue using the new departments and use the old for spare usage.

**After effect:** The company might lose the revenue in after sales, the 3rd party vendors often replace original with the spared parts to generate revenue. I believe that this led Mae Roth to develop the Service Appliance department.

**Needed State:** Mae Roth wants to provide 5 star service to all the customers who visit the AW, wants to introduce the new features that will come to AW, The new dept is set to increase customer satisfaction and customers as well as profit.

**WBS for Industry/System Analysis :** Added the WBS info in a Project Planning template, and made WBS using the resource template



Below is the project plan in a project planning software (monday.com): Assuming 8 hours/ day to work.

Service Department

| <input type="checkbox"/> | Task   |   | Person | Status        | Duration in day(s) | + |
|--------------------------|--|---|--------|---------------|--------------------|---|
| <input type="checkbox"/> | Find a suitable room                                   | + | SM     | Working on it | 1                  |   |
| <input type="checkbox"/> | Order the materials required                           | + |        | Done          | 12                 |   |
| <input type="checkbox"/> | Brief the staff  | + |        | Working on it | 4                  |   |
| <input type="checkbox"/> | Interview brainstorming                                | + |        | Working on it | 5                  |   |
| <input type="checkbox"/> | System Design  | + |        | Working on it | 5                  |   |
| <input type="checkbox"/> | Cybersecurity Design                                   | + |        | Working on it | 15                 |   |
| <input type="checkbox"/> | Update the site for the service department coming soon | + |        | Working on it | 6                  |   |
| <input type="checkbox"/> | Implement/Analyze the plans                            | + |        | Working on it | 20                 |   |
| <input type="checkbox"/> | Spread the news about the service department           | + |        | Working on it | 3                  |   |
| <input type="checkbox"/> | Start working  | + |        | Working on it | 3                  |   |
| <input type="checkbox"/> | + Add Task   |   |        |               |                    |   |
|                          |  |   |        |               | 74<br>sum          |   |

Analysis & Design

| <input type="checkbox"/> | Task                           |   | Person | Status        | Duration in day(s) | + |
|--------------------------|--------------------------------|---|--------|---------------|--------------------|---|
| <input type="checkbox"/> | Interview                      | + |        | Working on it | 24                 |   |
| <input type="checkbox"/> | User Questionnaire Development | + |        | Working on it | 5                  |   |
| <input type="checkbox"/> | Risk Identification            | + |        | Working on it | 3                  |   |
| <input type="checkbox"/> | DFD/ UML Diagrams              | + |        | Working on it | 5                  |   |
| <input type="checkbox"/> | Layout 1 / User Screen         | + |        | Working on it | 10                 |   |
| <input type="checkbox"/> | Testing Plan                   | + |        | Working on it | 15                 |   |
| <input type="checkbox"/> | Implementation Plan            | + |        | Working on it | 22                 |   |
| <input type="checkbox"/> | + Add Task                     |   |        |               |                    |   |
|                          |                                |   |        |               | 84<br>sum          |   |

**Risks for the Service Department System:** Made changes to the risks and added new risks

- When installing the service department, there are **scheduling conflicts**.
  - To solve this we can make a master schedule, budget for breaks, and we can hire some people for back-ups, and give workers the ability to propose an alternate time to work, this way the service department should hold with timings.
- IT Sector: If there are any problems, we can hire technicians beforehand and help us to solve IT problems or any any software related problems, before any customers are in the service department.

3. Financial Sector: We need to make a fixed amount to allot for the service department, it might fluctuate a little bit, but we need to make a fixed size so we don't run on empty while constructing a room and equipment, software workers for the Service Department. Make an excel sheet about all the requirements needed to make the department and share it with all the workers.
4. Roles: The workers need to know what their role is in the service department, if they have any questions, concerns, doubts, it's best to approach the floor supervisor and they can help proceed with the next steps

### **Questionnaire :**

To Melinda Parks (Programmer):

1. What are your thoughts on using Agile development techniques in this environment?
2. Are you leaning more towards Agile or other dev techniques?
3. What requirements are you expecting from a programmer in this position?
4. What do you know about this programming job, the skill it requires, and the maintenance it requires?
5. What coding languages are you proficient in? And why?
6. How do you keep up with current trends/tech in this field?
7. What is your ideal work environment?
8. What are you expecting from me to program for the service department?
9. What features are needed to add to the department?
10. What are the purpose of those features?
11. How does the UI need to look for this department? Any requirements do I need to meet?

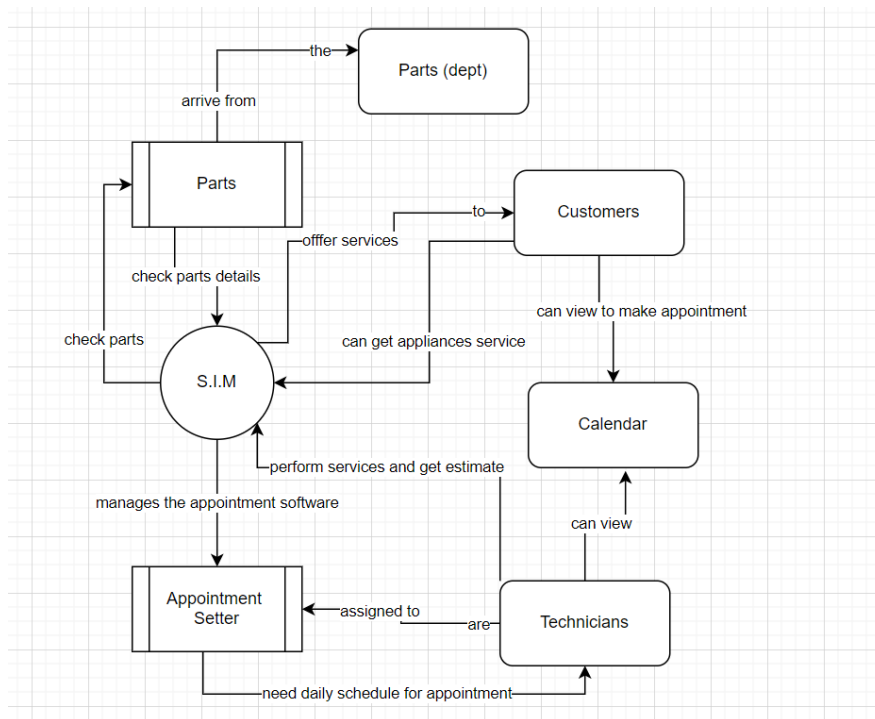
To Emily Johns (Service Manager)

1. How many service requests can we expect in a day?
  - a. What types of requests? How many do we get in a day? Average?
  - b. What factors or external factors will affect this position?
2. What types of metrics and data can we provide?
  - a. How can we track it? What type of software will be used to track?
3. What does a service manager do?
  - a. What are the methods in this service request?
  - b. Where does the service request start from?
  - c. Where will this manager be helpful in the service request position?

- d. What do I need to know about this position?
- e. If there is a bad experience with a customer regarding service how can I proceed next?

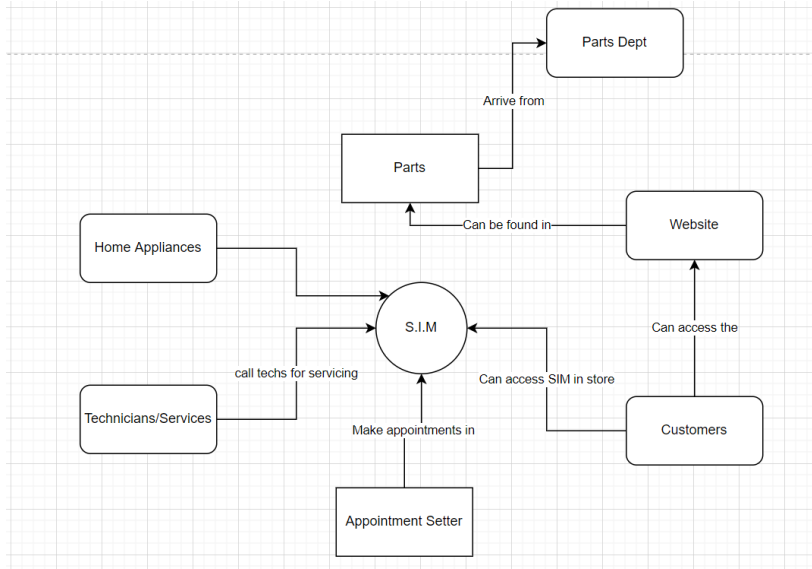
**Sampling:** I think it's best to go with stratified sampling, because there are advantages to using this technique, the main is it captures key population in this interview questions we want to interview for like the programmer who designs the interface and the Service Manager who will be overlooking the department. Similar to a weighted average like picking randomly, this method of sampling produces characteristics in the sample that are proportional to the overall population. Stratified random sampling works well for populations with a variety of attributes but is otherwise ineffective if subgroups cannot be formed.

**Data Flow Diagram:** Added active verb nouns to arrows, and customers access the website, and parts arrive from the parts store.



**Context Diagram:** Added active verb nouns to arrows, and customers access the website, and parts arrive from the parts store.





**Decision Table:** Removed excessive “Yes” and added (-), and updated it to a single yes, and multiple no’s

| Purchased Appliance | Bought Service Plan? | Serviced more than 3 times? | Service Fee? | Discount on the service fee? |
|---------------------|----------------------|-----------------------------|--------------|------------------------------|
| Yes                 | X                    | X                           | X            | X                            |
| No                  | No                   | X                           | Yes          | No                           |
| Yes                 | -                    | No                          | No           | No                           |
| No                  | No                   | Yes                         | -            | Yes                          |

**Decision Tree:**

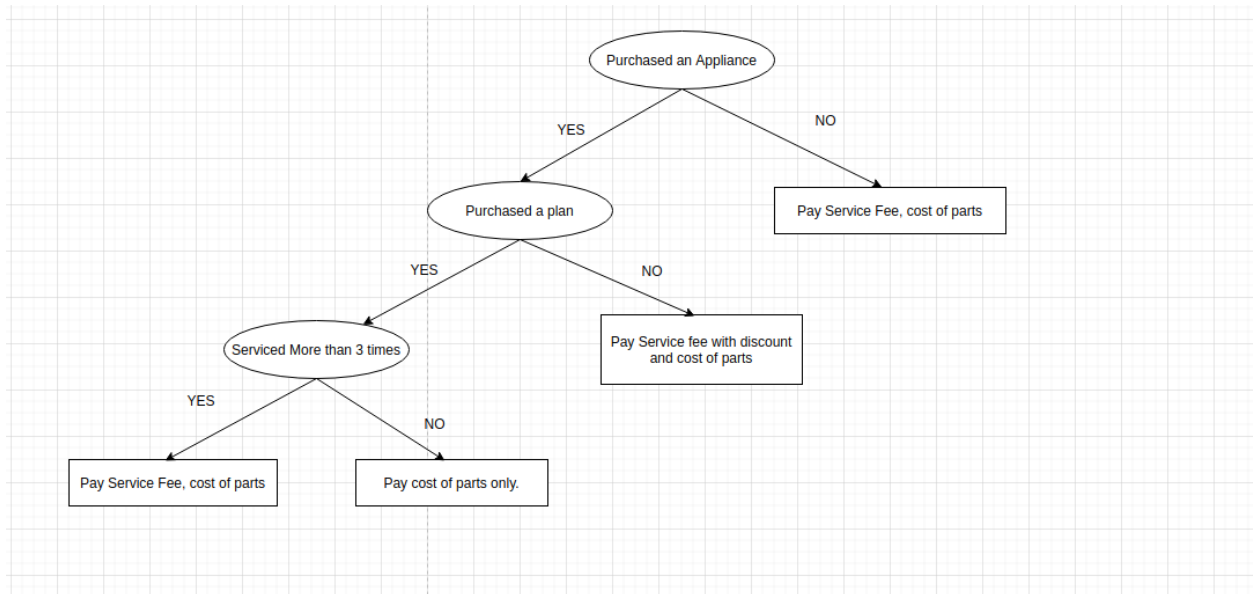
**Conditions:**

Appliance purchased from AW  
 Service plan bought by customers  
 Appliance repaired more or equal to 3 times in the year

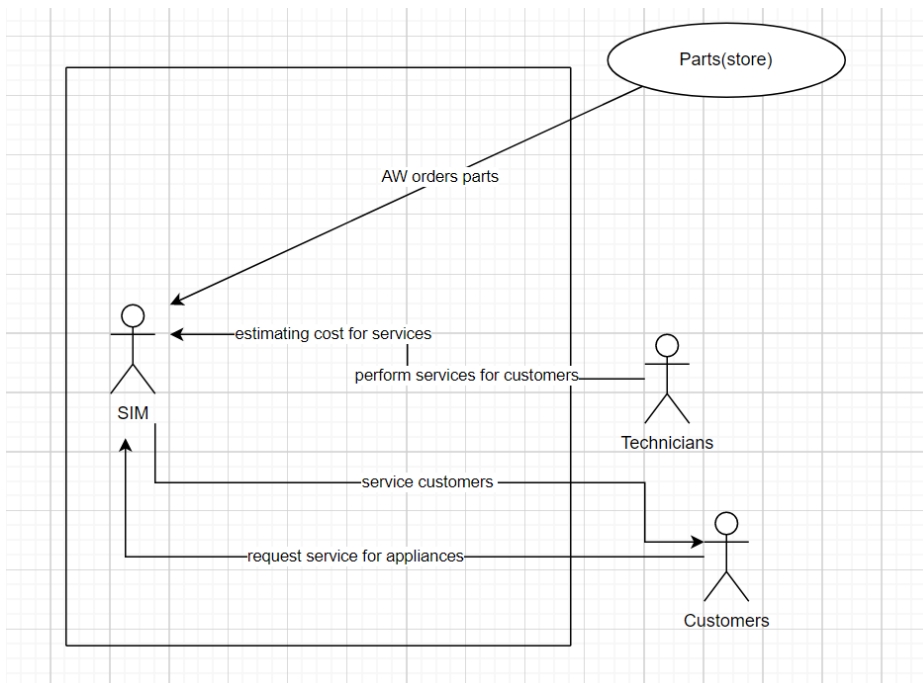
**Actions:**

No service plan  
 Customer paid the cost of parts  
 Paid the full service plan

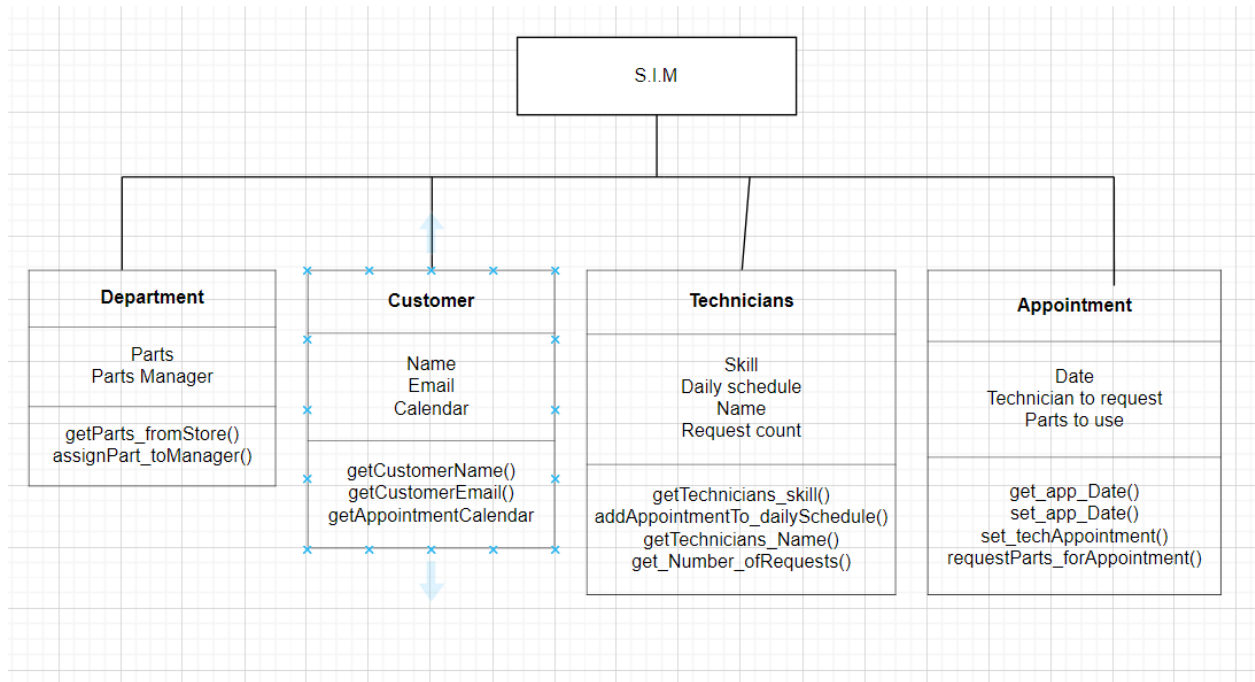
Customer gets 20% off discount



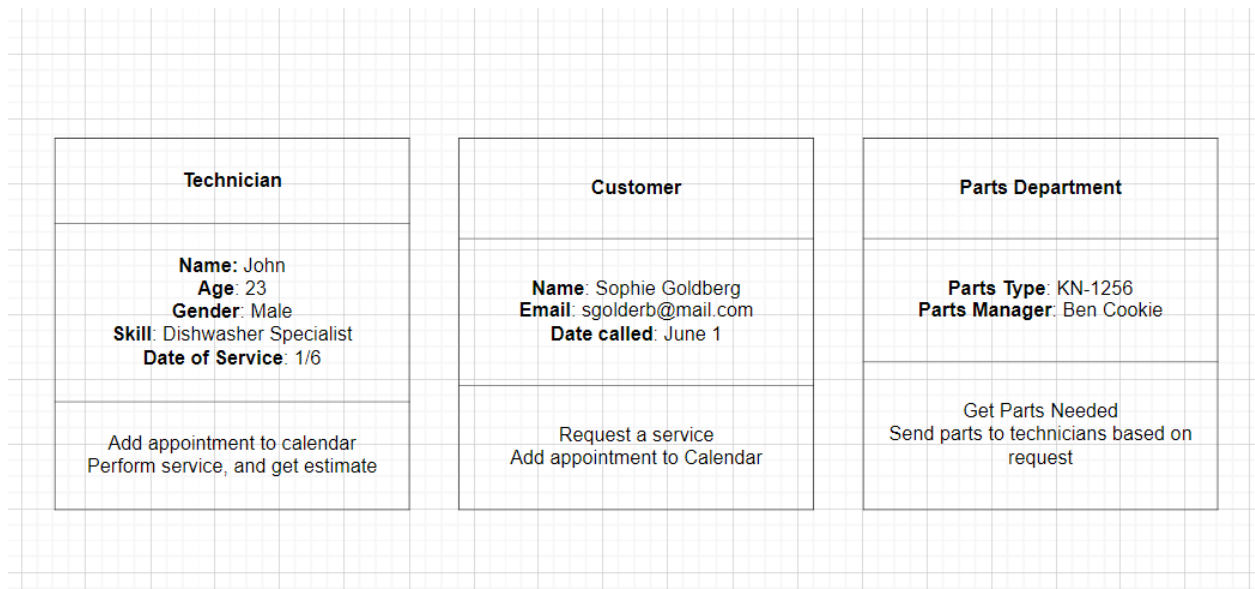
**Use Case Diagram:** Actors are outside the boundary, and made changes where the processes scope is smaller.



**Object Model:** Made changes to the object model with improved attributes and methods.



**Instance Examples :** Made changes to Instance examples and used entities from Object-Modeling.



**Service Software:** Made changes to the slides, added Service Software requirements, build costs, nice-to-have list with additional functionalities.



# Software Choice -Application Warehouse

Shashank M

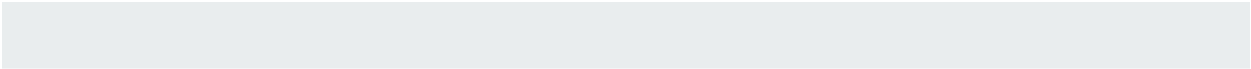


## Service Software Requirements from AW

- To schedule appointments: For the customers can utilize the software to schedule appointments. Mobile booking needed too.
- To create, edit, delete, re-book appointments with technicians for service appliances
- Manage services: Such as check with technicians, if they are ready with servicing.
- Use Calendar for booking, check available dates, etc.,
- Reminder service calls/messages
- Inventory check-up every given time. I.e every few hours.



## Service Softwares?

- There are many service software on the field, and it's tough to choose one among several to act as the new customers support at the AW.
  - As a result, I found out there are quite few that are best to act as service software that can schedule appointment, send emails, make changes to appointments.
  - The following with best customer reviews are: **Zendesk, and Vivantio**.
  - As a result, if we manage to get one of them to act as our hub for SIM's service software we should be on the golden phase.
- 



## Functionalities

### Vivantio

- Manage complex workflows
- Visualize ticket management
- Manage appointments
- Task Management
- Mitigate Business Risk

### ZenDesk

- Convert phone, chat, and email to tickets
- Manage and work on support tickets
- Support Reporting and Dashboards
- Create/Manage appointments (built-in)

## Packages Pricing

### ZenDesk

- Suite Team: \$49 per user/month
- Suite Growth: \$79 per user/month
- Suite Professional: \$99 per user/month

### Vivantio

- Value: \$42 per user/month
- Vital: \$52 per user/month
- Velocity: \$82 per user/month

## Price: In-House Build

|                           | <u>Cost per<br/>hour (for<br/>first year)</u> |
|---------------------------|---|
| Database Development      | \$ 60   |
| Web developers            | \$ 75   |
| App developers            | \$ 75   |
| UX designers              | \$ 60   |
| Business Analyst          | \$ 50   |
| Trainers                  | \$ 50   |
| Cybersecurity specialists | \$ 90   |
| System Admin              | \$ 70   |

| <u>Equipment:</u> |          |
|-------------------|----------|
| Servers           | \$ 2,500 |
| Routers           | \$ 200   |

**Total:** \$3230

Assuming **8 hr/day**, it would cost AW around **25,000 to 30,000** to build the software in-house.

## Software Choice (In-House vs Pre-Packaged)

### Pros

- Built for Unique Challenged, specifically designed to overcome any challenge
- Designed to meet any requirement
- Easily designed, modified, in the design phase
- Competitive advantage over rival companies, stand-out to attract customers

### Cons

- Has to be built from square one, endless customization, everything has be done from start.
- Quick fix? Custom software is not your solution, might take several months to look for a fix.
- Can only rely on the vendor who sold the software if any problem occurs
- Might cost extra money to make it and go through testing phases

## Software Choice (In-House vs Pre-Packaged)

### -Cont'd

### Pros

- Quick installation with recommended tools, and setup guides, might need to custom installed in some cases
- Low Cost since its already in golden status.
- Trusted source, will have broaden source of reputation, can see the reviews online before purchasing
- Reliable service if errors are bound to come

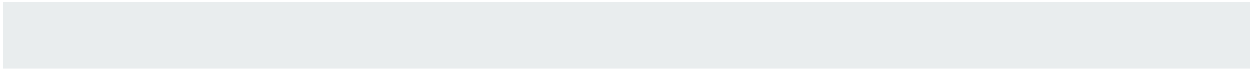
### Cons

- Might not be able to meet all of the clients requirements, might cost a bit, you are trading requirements for cost.
- Very rigid, and hard to modify since they come with a set of rules/config prior to installations.
- Compatibility issues, they cant run on some old or some new devices
- Most of the rival companies use the same software so youre putting on the same line as them


## Result?

The decision between a custom piece and off the shelf business software can have far-reaching consequences that are felt-years, its best to make/choose the software that can yield results for the long-term, rather than going for short-pain long gain.



## SaaS

### Pros

- Cost: Subscription-based software licensing make it simpler to understand and allocate costs for separate business units or departments.
- Maintenance: A subscription-based model means the publisher will automatically update your licenses as new versions are released.
- Mobility: With no disc to be installed, SaaS-based applications can be used anywhere there's a network connection. It's helping the mobile workplace become more attainable.

### Cons

- Security: Employees will want — and need — to take workplace software applications on the go.
- Contractual Obligations: The company needs to know how many licenses each business unit or department is using — as well as how many the business is entitled to — in order to avoid over- and under-usage.
- Control Loss: Applications were largely controlled by the business that used them. The SaaS model turns much of that control over to the publisher.





## Result?

*My Opinion?*

It's best to use installed/pre-packaged software in this aspect because of reliability and Security this is a multi-millionaire project for the long run, because vendors bought software come with updates, technicians, and relied help that can help us in the long shot, and can be modified upon requests, and can cost less and consumes less time



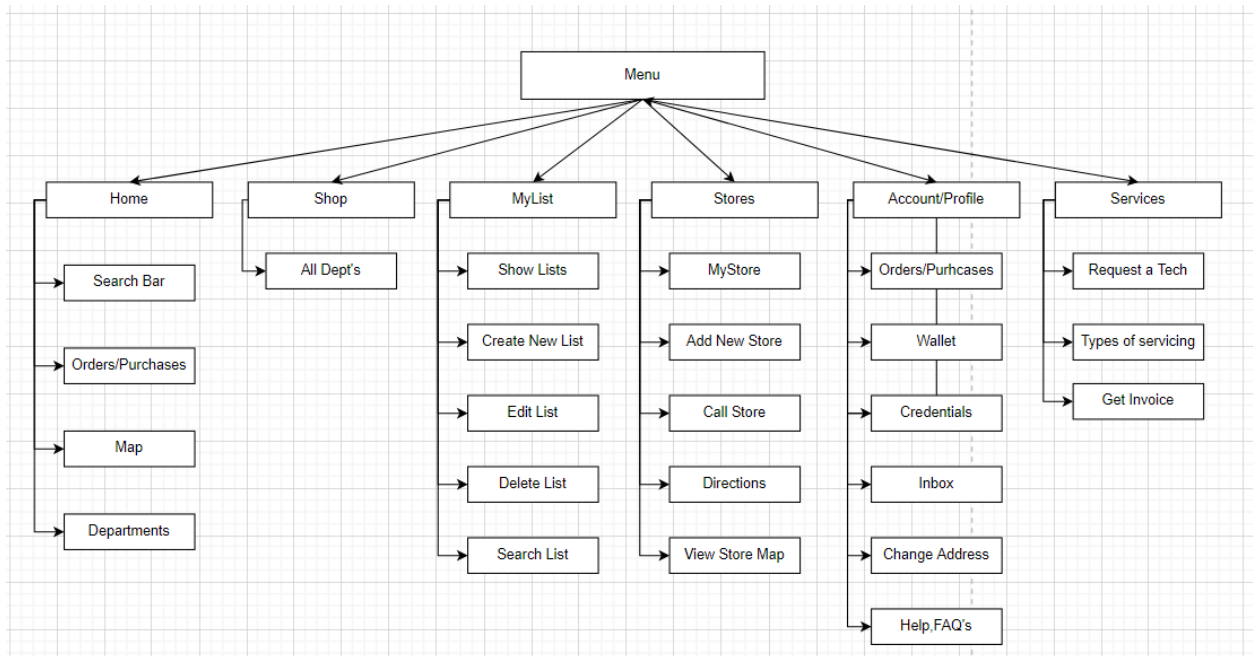
## Functionality- Must haves for the AW

1. **Simple Interface:** Look for easy to follow menus and help screens that can improve usability. Make sure the AW allows for simplified data entry and creation of template reports and charts.
2. **Tracking:** From the moment you receive an item into your warehouse until it leaves through the dock, your warehouse management system should track its every move
3. **Upgrades and Support:** Vendors who have an outstanding reputation for implementation and support. When investigating AW solutions, ask for a list of customer references.
4. **Reporting:** If the staff is reported by the time period, their brand and type of appliance in the software it will help AW a lot.
5. **Inventory Check:** Checking inventory every-few hours will tell us what we have in the store, and can supply that to the customers, and can get extra supplies from store if we run out.

## Nice-to-have List

- A like feature to live chats in our software, so people can like the message to the people they talk to.
- Same booking: Booking another appointment with the same technician, rather than having the appointment with the same person
- VideoChat: Instead of typing, they can rather video chat to the technician they're talking to. But this is not required in any way.


**Hierarchical Diagram:** Added invoicing, appliances, and the ability to edit, delete and search.




**Screen Examples:** Made prototypes based on AW.

**Sample Contact US Page:**

**Input rules:** User inputs their name takes in String input, Email takes in string input which is unique, and the subject as well their message (string) and hits send.





APPLIANCE  
WAREHOUSE

[Home](#)
[Website Features](#)
[News/Features](#)

[Contact US](#)

**Name:**

**E-Mail:**


**Subject:**

**Message**

[Send](#)

### Sample Make an Appointment Page:

**Input rules:** User checks the reason for appointment choosing an option which can be selected from the dropdown, and enters the name (**string**), email (**string**), and the phone number which takes integers as input, as well as picking the date from below to book which uses **Date** feature., and **time** to choose from the box.



[News](#)
[Contact US](#)
[Home](#)
[What's coming?](#)

[Book an Appointment](#)

**Reason**


**Name:**

**E-Mail:**

**Phone Number: +1**

**Pick-a date from Below**

|          |          |
|----------|----------|
| 9:45 am  | 9:45 am  |
| 10:30 am | 10:30 am |



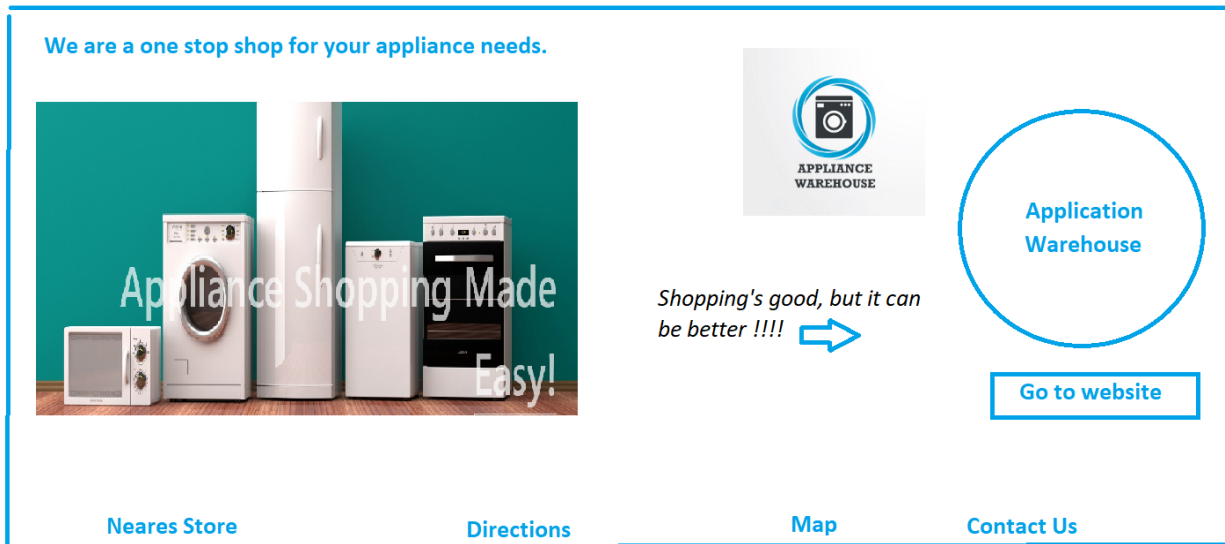
APPLIANCE  
WAREHOUSE

[Cancel](#)

[Book an appointment](#)

### Sample Opening Page:

**Input rules:** User sees the website, and decides to click on go to website button and sees the home page.



### Prototyping:

The new application can run on mobile platforms. Developers need to publish their apps on mobile platforms. Simply integrate a responsive web page to easily launch the app on a mobile platform, and resize the web page to fit the screen of your mobile phone, allowing users to see all or any perspective of your website or application. can do. clearly. This is the perfect developer to use responsive websites. This website can fit the website to the size of your mobile phone and will run smoothly on your mobile platform without major problems.

### Advantages of prototyping:

1. Flexible design is easy to integrate new features.
2. Easy to find errors over the course of development.
3. We are able to find missing functionality easily.
4. Ideal for an online system as we can use the user feedback.
5. There is scope of refinement in the project .
6. Ensures greater level of customer satisfaction and trust and reliability.

Sales Report

Application Warehouse

By Product

By Customer

Top 10 Products

Top 10 Customers

| Product             | Customer       | Qtr 1       | Qtr 2       | Qtr 3     | Qtr 4       | Total       |
|---------------------|----------------|-------------|-------------|-----------|-------------|-------------|
| Dishwasher          | Sophie         | \$ -        | \$ 702.00   | \$ -      | \$ -        | \$ 702.00   |
| Refridgerator       | Mitch          | \$ 312.00   | \$ -        | \$ -      | \$ -        | \$ 312.00   |
| Gardening Tools     | Jamie F        | \$ -        | \$ -        | \$ -      | \$ 1,170.00 | \$ 1,170.00 |
| Microwave           | Mike Singh     | \$ 1,170.00 | \$ -        | \$ -      | \$ -        | \$ 1,170.00 |
| LG Washer           | Sophie         | \$ 1,123.20 | \$ -        | \$ -      | \$ 2,607.15 | \$ 3,730.35 |
| LG Dishwasher Parts | George Kostanz | \$ -        | \$ 280.80   | \$ -      | \$ -        | \$ 280.80   |
| Samsung Tools       | Felicia        | \$ 62.40    | \$ -        | \$ -      | \$ -        | \$ 62.40    |
| Samung Microwave    | Mitch          | \$ -        | \$ 1,560.00 | \$ 936.00 | \$ -        | \$ 2,496.00 |

**Exception Report:** Created a new exception report, and inserted data using records.

Exception Report

|                     |                    |                        |             |
|---------------------|--------------------|------------------------|-------------|
| Project Name:       | Faulty Part        |                        |             |
| Date: <del>XX</del> | XXX                | Release: <del>XX</del> | Draft/Final |
| Author:             | Manager            |                        |             |
| Owner:              | Sophie Goldberg    |                        |             |
| Client:             | Liam Henson (tech) |                        |             |
| Document Number:    | 0012388981         |                        |             |

Note: This document is only valid on the day it was printed

Revision History

Date of next revision:

| Revision Date | Previous Revision Date | Summary of Changes   | Changes Marked |
|---------------|------------------------|--|----------------|
| MMDDYY        | MMDDYY                 | Made changes behalf of customers request to the dishwasher | DONE           |
| MMDDYY        | MMDDYY                 | Got the parts from the store, went to fix the dishwasher   |                |
|               |                        |  |                |

Approvals



This document requires the following approvals. A signed copy should be placed in the project files.

| Name                   | Signature   | Title           | Date of Issue | Version |
|------------------------|-------------|-----------------|---------------|---------|
| Liam Henson            | Liam Henson | Technician      | 1/6           | 1.1     |
| <del>Emily</del> Johns | Emily J     | Service Manager | 1/7           |         |
|                        |             |                 |               |         |

**Summary Report:** Made a mockup summary report from the emails

|                       |  |
|-----------------------|--|
| Summary Report        | Execution Phase<br>Project Tracking and Management |
| Application WareHouse | Emily J  |

**To:** {Emily J}  
**From:** {Mae Roth}  
**Subject:** Summary Report  
**Date:** mm/dd/yy

▲ Summary Report

|                      |                     |                   |              |
|----------------------|---------------------|-------------------|--------------|
| Project Name:        | Sales Report        | Report Period:    | MMDDYY       |
| Project Manager:     | Maddox Farley       | Phone & E-mail:   | XXX-XXX-XXXX |
| Project Description: | Just a sales report | Project Priority: | Medium       |

Project Status Summary: Green

**Key accomplishments last period:**

- Sold many products in the last few hours with zero drawbacks, but some customers refunded.
- Important meeting about SIM Management.
- Helpful about the software meeting.
- One of the staff got praised for selling 2750\$ worth of goods in the store.

**Upcoming tasks for this period:**

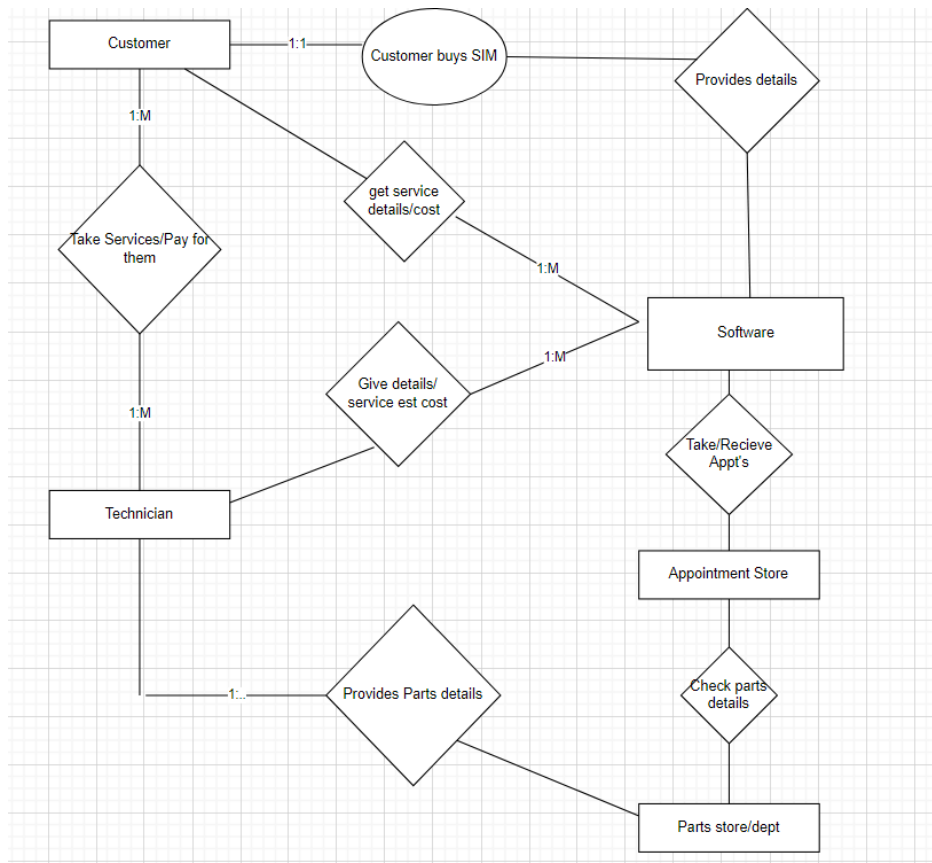
- Important meeting scheduled for tomorrow.

**Issues:** None for the time being.

- List principal open issues – try to identify an owner of the issue and try to include a task in the "Upcoming tasks for this period" that will move this issue toward closure.
- Don't try to track all project issues in this report. Just list the principal ones along with any progress toward closing them.

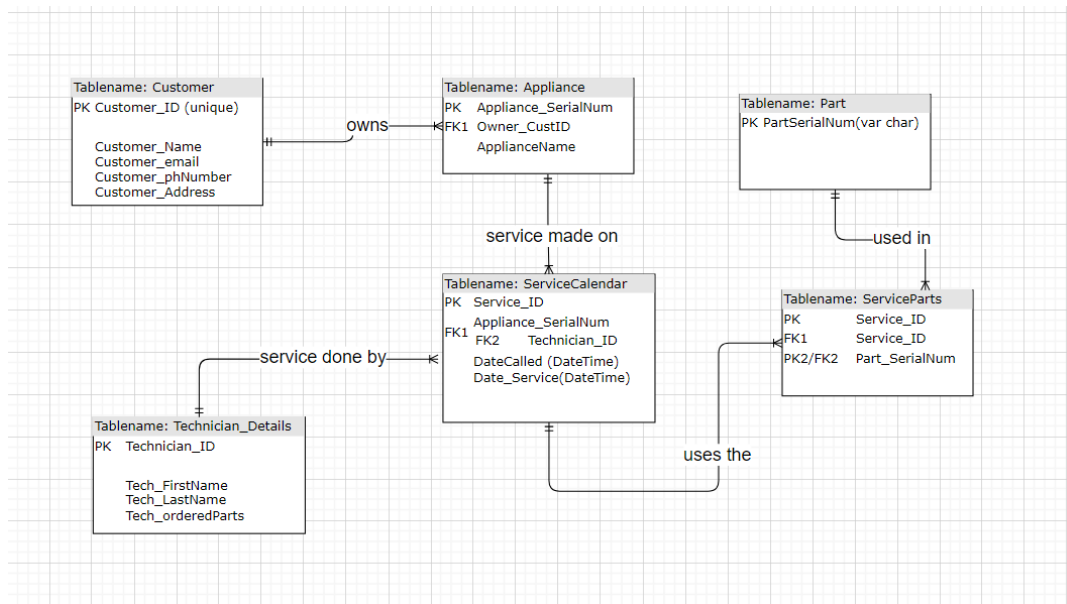
We can distribute most of the reports using E-Mail or any of the report generating softwares in the softwares we use, and set a command to generate commands on a basis and share with the workers and staff with their work generated E-Mails.

**ERD Diagram:** Made changes and added the 1:M relationship to the diagram, and removed SIM Entity.





**Table Design:** Made changes and added customer's new attributes, and added part name to the part table as well as added *appliance's name* to appliance table.



**Sample Data: Table Creation : Using the entities listed above**

```

> create table if not exists Customer(
  Customer_ID int not null primary key,
  Customer_Name varchar(50) not null,
  Customer_PhNumber varchar(13) not null,
  Customer_Email varchar(20) unique not null,
  Customer_Address varchar(85)
);

> create table if not exists Part(
  Part_Num varchar(20) not null primary key
);

> create table if not exists Appliance(
  Appliance_SerialNum varchar(30) not null primary key,
  Customer_ID int not null,
  ApplianceName varchar(34),
  Foreign key (Customer_ID) references Customer_Name(Customer)
);

> create table if not exists Service_Parts(
  Part_Num varchar(20) not null primary key,
  Service_ID varchar(80) primary key,
  foreign key (Part_Num ) REFERENCES Part(Part_Num),
  foreign key (Service_ID) REFERENCES ServiceCalendar(Service_ID)
);

> create table if not exists ServiceCalendar(
  Service_ID varchar(80) primary key,
  Serial_Num int not null,
  DateCalled date,
  Date_of_Service date,
  Technician_ID int not null,
  FOREIGN KEY (Technician_ID ) REFERENCES Technician(Technician_ID ),
  FOREIGN KEY (Serial_Number ) REFERENCES Appliance(Appliance_SerialNum)
);

> create table if not exists Technician (
  Technician_ID int not null primary key,
  Tech_FirstName varchar(22),
  Tech_LastName varchar(22),
  PartsOrdered varchar(100)
);

```

### **Data Insertion: 3 Dummy Data into each table**

**Tables: Customer, Appliance, Part, Service \_part, Service \_Calendar, Technician**

```

insert into Customer (Customer_ID, Customer_Name, Customer_PhNumber, Customer_Address)
values
(1, "Sophie Goldberg", "508-555-1256", "123 Main St, Hopkinton, MA"),
(2, "Mitch Chu", "617-555-9898", "5525 Winter Rd, Medford, MA"),
(3, "Jamie Fernandez", "617-555-4125", "2 Hope St, Hull, MA");

insert into Appliance (Customer_ID, Serial_Num, Appliance_Name)
values
(1, "KN-78-215-896", "Refrigerator"),
(2, "WP-55-311-698", "Dishwasher"),
(3, "Dishwasher", "WP-78-956-694");

insert into Part()
values
("KN-1256"),
("WP-1788"),
("WP-8877");

insert into Service_Parts()
values
("KN-1256", "Robles"),
("WP-1788", "Wong"),
("WP-8877", "Henson");

insert into ServiceCalendar (ServiceID, Serial_Num, DateCalled, Date_of_Service)
values
("Robles", "KN-78-215-896", "01-06-2022", "01-10-2022"),
("Wong", "WP-55-311-698", "01-06-2022", "01-07-2022"),
("Henson", "WP-78-956-694", "01-07-2022", "01-09-2022");

insert into Technician (Technician_ID, Technician_Name, Parts_Ordered)
values
(0101, "Robles", "KN-1256"),
(0102, "Wong", "WP-1788"),
(0103, "Henson", "WP-8877");

```

**ERP Softwares:** I found that Oracle Netsuite, MS Dynamic 365, and Oracle Cloud are the best ERP Softwares on the market.

| Oracle NetSuite                                  | MS Dynamic 365   | Oracle Cloud   |
|--|--|--|
| Customer Experience: Are less crowded, and mixed | Customer Experience: Very large buyers, resellers, and highly system integrators | Customer Experience: Full public cloud access to the user. |
| Implementation: Less customizations              | Implementation: Complex, and hard to use UI                                      | Implementation: More customization, and security offered.  |

|   |  |  |
|---|--|--|
| <p>Less functionality</p> <p>It is also a SAAS, and has medium cloud services</p> <p>Flexibility, yes because it is a SAAS system, so common system.</p> <p>Provides scalability via standardization since it wasn't personalized for some parts of a company</p> <p>Organization is very small-medium size</p> | <p>Functionality, I would say Medium, on a scale 6-7</p> <p>Has less cloud, because they were converted to cloud now, before using GPN, and Axapta.</p> <p>Cloud system so more customizations over Flexibility</p> <p>Has a greater breadth of functionality to address more diverse business processes</p> <p>Organization is med-large.</p> | <p>High Functionality</p> <p>Gives out unique security, and terms with regulations, and high firewalls with cloud environments.</p> <p>Gives more flexibility b/w cloud and customers are Oracle Cloud</p> <p>You can take advantage to your liking about the Oracle Cloud.</p> <p>Large size corporation.</p> |
|---|--|--|

Based on the information above, the best I would think is the Oracle Cloud, because when it comes to security like Carli said Cloud would be the best fit, and you can customize the Cloud as we wish in Oracle Cloud, and also provides Scalability, Flexibility, and Security.

**Below are the images attached for deeper analysis in page 5**

### **SIM Network:**

**Scalability:** We can add delivery system because more packages can be delivered by adding more delivery vehicles. More staff so more people can help if there are any customers if needed help, more servers so they can take traffic from online sources from the website. Daily maintenance to the server so they do not overheat from the server room.


**For System Requirements:** We can add testing tools, security, train the staff so they know how to handle the system, use a high-end security software with a decent pay, Oracle Cloud to store the data from the AW so that anyone from the AW can access it and make some changes if needed. For the network, it would be best to go with star topology because they are fast and reliable since they only depend on single-hop features.

For processing I think it is best to go with online processing since everyone is mostly online, we can add more servers to take traffic and buy appliances from AW with no lags.

**Security:** To protect the servers and machines, we will need....

1. Take inventory of what we have every evening before the store's closing hours.
2. Gather the testing tools
3. Make sure everyone knows their role for the servers and the machines
4. Automated scans so we can rule out that every machine is there, and scan for any bugs in the servers
5. Sometimes automated doesn't cover everything, so run manual analysis too.
6. Focus on main and vulnerabilities in the machines and servers so if we can get them fixed, its easy to focus on the smaller pieces.
7. Source code analysis by a technician
8. Lastly, run again and make sure everything runs smoothly.

### **Comparisons for ERP Softwares: Deeper Analysis**

|                     | ORACLE     |  | ORACLE<br>NETSUITE |
|---------------------|------------|---|--------------------|
| OVERVIEW            |            |   |                    |
| PRODUCT NAME        | Oracle ERP | Dynamics 365 for Operations   | NetSuite ERP       |
| BUSINESS SECTORS    |            |   |                    |
| DISTRIBUTION        | ✓          | ✓   | ✓                  |
| GOVERNMENT & NPO    | ✓          | ✗   | ✓                  |
| MANUFACTURING       | ✓          | ✓   | ✓                  |
| RETAIL              | ✓          | ✓   | ✓                  |
| SERVICES            | ✓          | ✓   | ✓                  |
| INDUSTRY            |            |   |                    |
| AEROSPACE & DEFENSE | ✓          | ✓   | ✓                  |
| AUTOMOTIVE          | ✓          | ✓   | ✓                  |
| CHEMICAL            | ✓          | ✓   | ✓                  |

|                        |   |   |   |
|------------------------|---|---|---|
| CONSTRUCTION           | ✓ | ✓ | ✓ |
| COSMETICS              | ✓ | ✓ | ✓ |
| ELECTRONICS            | ✓ | ✓ | ✓ |
| ENERGY/POWER/UTILITIES | ✓ | ✗ | ✓ |
| ENGINEERING            | ✓ | ✓ | ✓ |
| FASHION                | ✓ | ✓ | ✓ |
| FINANCIAL SERVICES     | ✓ | ✗ | ✓ |
| FOOD & BEVERAGE        | ✓ | ✓ | ✓ |
| LOCAL GOVERNMENT       | ✓ | ✓ | ✓ |
| MEDIA                  | ✓ | ✓ | ✓ |
| MEDICAL & HEALTHCARE   | ✓ | ✓ | ✓ |
| METALWORKING           | ✓ | ✓ | ✓ |
| OILFIELD               | ✓ | ✓ | ✓ |
| PACKAGING              | ✓ | ✓ | ✓ |

|                                 |   |   |   |
|---------------------------------|---|---|---|
| PAINT & ADHESIVES               | ✓ | ✓ | ✓ |
| PHARMACEUTICAL                  | ✓ | ✓ | ✓ |
| PLASTICS & RUBBER               | ✓ | ✓ | ✓ |
| PRINT & DESIGN                  | ✓ | ✓ | ✓ |
| RENTAL                          | ✓ | ✓ | ✓ |
| TELECOMMUNICATIONS              | ✓ | ✓ | ✓ |
| WOODWORKING                     | ✓ | ✓ | ✓ |
| CANNABIS                        | ✗ | ✗ | ✗ |
| EDUCATION                       | ✗ | ✗ | ✗ |
| NONPROFIT                       | ✗ | ✗ | ✗ |
| ERP SOFTWARE FEATURES           |   |   |   |
| BILLING                         | ✓ | ✓ | ✓ |
| BUSINESS INTELLIGENCE/ANALYTICS | ✓ | ✓ | ✓ |
| COSTING                         | ✓ | ✓ | ✓ |

|                         |   |   |   |
|-------------------------|---|---|---|
| CRM                     | ✓ | ✗ | ✓ |
| CUSTOMER SERVICE        | ✓ | ✗ | ✓ |
| PRODUCT DESIGN          | ✓ | ✗ | ✗ |
| FINANCIALS & ACCOUNTING | ✓ | ✓ | ✓ |
| HR                      | ✓ | ✓ | ✓ |
| INVENTORY MANAGEMENT    | ✓ | ✓ | ✓ |
| ORDER MANAGEMENT        | ✓ | ✓ | ✓ |
| PLANNING & SCHEDULING   | ✓ | ✓ | ✓ |
| PROJECT MANAGEMENT      | ✓ | ✓ | ✓ |
| PURCHASING              | ✓ | ✓ | ✓ |
| QUALITY CONTROL         | ✓ | ✓ | ✓ |
| SALES                   | ✓ | ✓ | ✓ |
| SHIPPING & DISTRIBUTION | ✓ | ✓ | ✓ |
| SUPPLY CHAIN MANAGEMENT | ✓ | ✓ | ✓ |

|                                  |   |   |   |
|----------------------------------|---|---|---|
| WAREHOUSE MANAGEMENT             | ✓ | ✓ | ✓ |
| ASSET MANAGEMENT                 | ✓ | ✓ | ✓ |
| DOCUMENT MANAGEMENT              | ✓ | ✗ | ✗ |
| CUSTOMER SUITABILITY             |   |   |   |
| ENTERPRISE (1000+ EMPLOYEES)     | ✓ | ✗ | ✗ |
| MEDIUM SIZE (251-1000 EMPLOYEES) | ✓ | ✓ | ✓ |
| SMALL BUSINESS (1-250 EMPLOYEES) | ✓ | ✓ | ✓ |
| ADDITIONAL PRODUCT INFO          |   |   |   |
| MULTI LANGUAGE                   | ✓ | ✓ | ✓ |
| MULTI CURRENCY                   | ✓ | ✓ | ✓ |
| CUSTOMIZABLE                     | ✓ | ✓ | ✓ |
| MOBILE CAPABILITIES              |   |   |   |
| ANDROID APP                      | ✓ | ✓ | ✓ |
| IOS APP                          | ✓ | ✓ | ✓ |

|                      |         |   |                         |
|----------------------|---------|---|-------------------------|
| WEB APP              | ✓       | ✓ | ✓                       |
| SYSTEM HOSTING       |         |   |                         |
| CLOUD                | ✓       | ✓ | ✓                       |
| INSTALLED ON PREMISE | ✓       | ✓ | ✗                       |
| REVIEWS              |         |   |                         |
| REVIEW SCORE         |         |   |                         |
| OTHER INFORMATION    |         |   |                         |
| PRICING              | \$1,200 |   | Starting at ~\$10K/year |