

Appliance Warehouse Case: Student Systems Analysis and Design

System Analysts:

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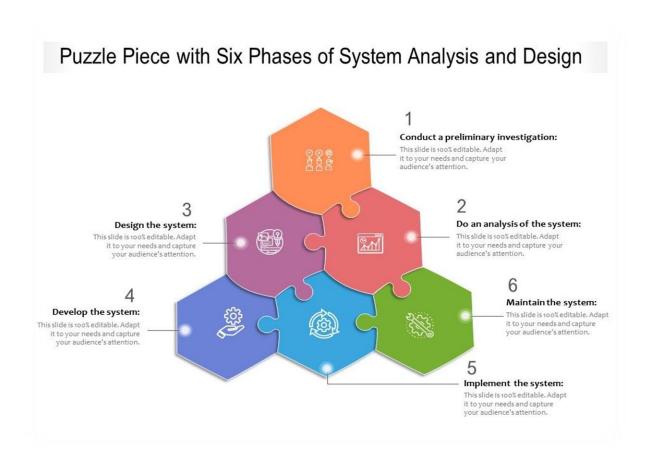
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Appliance Warehouse Project Charter

PROJECT TEAM MEMBERS			
Team Lead	Date	From	to
Valeria Tamez		8/29/21	9/12/21
Fred Hayes		9/19/21	10/3/21
Cade Schule		10/4/21	10/10/21
Bryanna Parkoff		10/20/21	11/1/21
Anthony Jamieson		11/1/21	11/12/21
Sarah Munn		11/15/21	12/03/21

PROJECT DETAILS

- Mission: Our team will work in a timely manner and will use our knowledge and talent to
 ensure we complete the Appliance Warehouse project, while giving the current team lead our
 full support.
- Vision: Our team is focused on producing a project that meets the time, cost and within scope requests of our client.
- **Scope:** Our team is working to establish the Service Department for the Appliance Warehouse organization.
- O Success metrics: Team members agree to attend meetings on time and contribute their ideas, each member is supportive of the goal.



AW MODULE 2

REQUEST 1:

As our new systems analyst, we need your help with some organizational and industry research. First, you need to familiarize yourself with our organization. You should create an organizational chart so you can visualize how we will layout AW's organization with the additional proposed department. Next, you will need to perform an analysis, such as a SWOT diagram, to assess whether this new service specialty will be an appropriate strategy for us long term.

REQUEST 2:

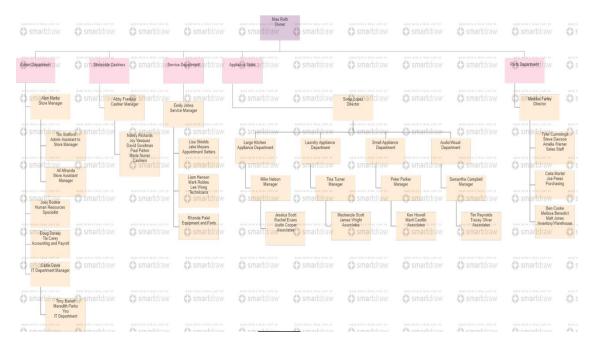
As the analyst, we are looking to you to for recommendations. Make sure to create an opportunity statement for this new department. And make sure that the mission statement on our website is still appropriate. If it is no longer appropriate, please suggest regarding a modification for the mission statement.

DELIVERABLE 1 Hi Carlie,

Thank you so much for reaching out! I've attached the organizational chart and the SWOT analysis.

Thanks!

Org Chart Proposal



Appliar	nce Warehouse				
SWOT Analysis					
STRENGTHS	WEAKNESSES				
Employee Benefits	Lack of products shown on their website (sample products)				
24 hour guarentee	Needs some sort of customer satifisfaction or reviews				
One stop shop for appliances	No comparison of competitor prices				
Replacement parts	No store address to find appliance store				
Website accessibility	Lacks website details				
OPPORTUNITIES	THREATS				
OF FORTOINTIES	IIIILAIS				
Employment	Competitive companies				
Customer marketing	Customer comparison shopping				
Can be the premier store	Not enough marketing				
Growth	Shortage in material				
Satisfying customers	Not meeting customer needs				

DELIVERABLE 2

HI CARLIE,

I TOOK A LOOK AT THE WEBSITE AND CAME UP WITH SOME RECOMMENDATIONS BEYOND JUST THE MISSION STATEMENT-

WEBSITE RECOMMENDATIONS-

ADD LANGUAGE TO THE WELCOME STATEMENT AT THE TOP OF THE HOME PAGE TO INCLUDE LANGUAGE REGARDING THE NEW SERVICE DEPARTMENT. SOMETHING LIKE THIS-

LOOKING FOR APPLIANCE PARTS OR SERVICE? YOU'VE COME TO THE RIGHT PLACE! CALL US AT 800-555-1234 TO SCHEDULE ONE OF OUR LICENSED SERVICE PROS TO COME TO YOU OR STOP BY OUR STORE TO GET THE ALL THE PARTS YOU NEED. WE EITHER HAVE THE PARTS IN STOCK OR CAN GET ANY PART IN 24 HOURS. NO ONE ELSE EVEN COMES CLOSE TO THE 24-HOUR GUARANTEE. WE GUARANTEE IT! ADJUST THE MISSION STATEMENT ON THE PAGE FROM, "WE ARE YOUR ONE STOP SHOP FOR ALL OF YOUR HOME APPLIANCES AND PARTS!" TO "WE ARE YOUR ONE STOP SHOP FOR ALL OF YOUR HOME APPLIANCES. SERVICE. REPAIR AND PARTS!" ADD A SECTION IN THE TOP EYEBROW LEVEL NAVIGATION BETWEEN "PRODUCTS" AND "EMPLOYMENT" CALLED "SERVICE" THAT LEADS TO A PAGE HIGHLIGHTING BOTH THE APPLIANCE PARTS AND APPLIANCE SERVICE" DEPARTMENTS INCLUDING CONTACT INFORMATION, INQUIRY FORMS AND POSSIBLY AN INTERACTIVE SERVICE BOT FOR CUSTOMERS TO ENGAGE WITH DURING THEIR INTERACTION WITH THE SITE. ON THE HOME PAGE, JUST BELOW THE MISSION STATEMENT WHERE THE SUBFEATURES FLYOUT FOR KITCHEN APPLIANCES, HOUSEHOLD APPLIANCES, LAUNDRY APPLIANCES AND REPLACEMENT PARTS ADD A FULL WIDTH SUBFEATURE WITH AN APPLICABLE ICON AND THE TEXT "APPLIANCE SERVICE AND REPAIR, TRUST OUR LICENSED SERVICE PROFESSIONALS TO KEEP YOUR APPLIANCES RUNNING AT PEAK EFFICIENCY"

HERE'S A COPY OF THE OPPORTUNITY STATEMENT.

KIND REGARDS.

	nity Statement For ouse Service/Repair
We will improve the experience of	Appliance Repair.
for	Non-mechanically inclined appli- ance customers who need help maintaining their appliances.
The user struggles today because	Modern appliances are very expensive and not easy to fix without the right skill set and parts.
Solving this will be good for our business because	Offering full service for the appliances they sell would make Appliance Warehouse a more attractive place to purchase from. Adding a repair service would also enhance Appliance Warehouse's ability to sell parts.

AW MODULE 3

REQUEST:

I NEED YOU TO IDENTIFY ALL OF THE TASKS THAT YOU WILL NEED TO COMPLETE. I FIND IT IS HELPFUL TO CREATE A WORK BREAKDOWN STRUCTURE TO IDENTIFY THE TASKS. DON'T FORGET TO INCLUDE THE SYSTEM AND INDUSTRY ANALYSIS, SYSTEM DESIGN, IMPLEMENTATION PLANS. AND SECURITY TASKS IN YOUR WBS.

1

AS BEST YOU CAN, ASSIGN DURATIONS TO THESE TASKS. WE HAVE SOME HISTORICAL DATA IN THE RESOURCE LIBRARY. IF YOU ARE UNCERTAIN ABOUT THE TIME ESTIMATE, I FIND THAT IT BEST TO COME UP WITH A BEST, WORST, AND MOST LIKELY TIME ESTIMATES. THEN I ADD UP THE ESTIMATES (BEST + WORST + (4 X MOST LIKELY)) BY GIVING MORE WEIGHT TO THE MOST LIKELY AND THEN DIVIDE BY 6.

PLEASE PUT ALL OF THIS INFORMATION INTO YOUR PREFERRED PROJECT MANAGEMENT SOFTWARE PACKAGE AND SHARE THE FILE WITH ME.

BEFORE YOU LEAVE FOR THE WEEKEND, COULD YOU MAKE A LIST OF ALL THE POSSIBLE RISKS FOR THIS SERVICE DEPARTMENT SYSTEM PROJECT? I'D LIKE TO THINK ABOUT OUR RISKS OVER THE WEEKEND AND DISCUSS WITH YOU ON MONDAY.

DELIVERABLE 1

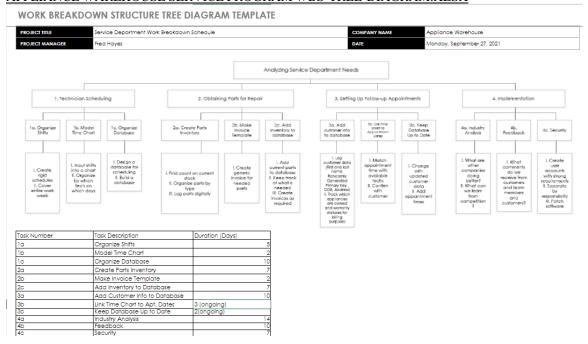
HELLO CARLIE!

HERE IS THE TASK LIST THAT YOU REQUESTED. PLEASE HAVE A LOOK AND LET US KNOW IF EVERYTHING MAKES SENSE OR IF ANYONE IN THE ORGANIZATION HAS ANY QUESTIONS. WE WOULD BE HAPPY TO DISCUSS ANYTHING ABOUT THE DOCUMENT AT OUR NEXT MEETING.

HAVE A GREAT DAY!

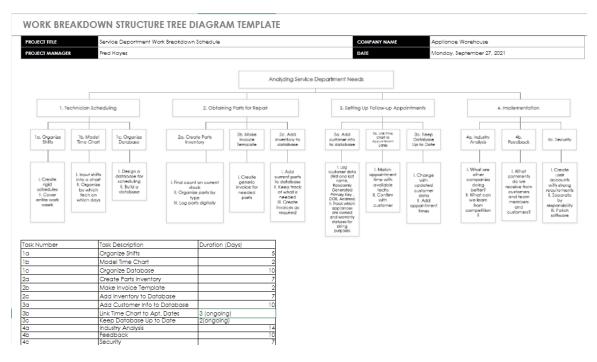
FRED

APPLIANCE WAREHOUSE SERVICE PROGRAM WBS-TREE-DIAGRAM.XLSX



DELIVERABLE 2 HELLO CARLIE,

THANKS FOR REACHING OUT! AFTER SOME RESEARCH AND REFLECTION ON PREVIOUS EXPERIENCES, OUR TEAM HAS PUT TOGETHER A WORKABLE TIMETABLE FOR THE TASKS I SENT YOU BEFORE. I HAVE ADDEED IT TO THE WBS DOCUMENT I SENT YOU BEFORE TO KEEP THINGS CONSOLIDATED. HERE IS THE UPDATED LINK- APPLIANCE WAREHOUSE SERVICE PROGRAM WBS-TREE-DIAGRAM.XLSX THANKS AGAIN AND HAVE A GREAT EVENING! FRED

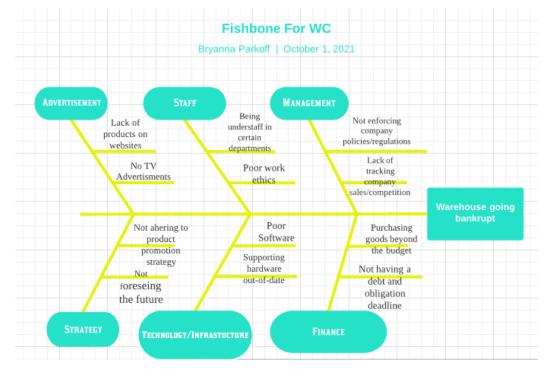


DELIVERABLE 3 HELLO CARLIE,

THE LIST OF RISKS IS A GREAT IDEA! I PULLED THE TEAM TOGETHER AND THIS IS WHAT WERE ABLE TO COME UP WITH. WE ALSO ATTEMPTED THE FISHBONE TO COMPARE END RESULT WITH MATRIX. CHECK IT OUT. IT NICE!

RISK MATRIX RISK ASSESSMENT DOCUMENT.XLSX
3X3 RISK MATRIX.XLSX

HAVE A GREAT WEEKEND! ~FRED



3x3 RISK MATRIX

	SEVERITY			
LIKELIHOOD	1	2	3	
	LOW	LOW	MEDIUM	
1	– 1 – Technician Repairs	– 2 – Follow-Up Appointments	– 3 – Obtaining Parts for repair	
	LOW	MEDIUM	HIGH	
2	– 2 – Employee Reliability	-4 – Competition	– 6 – Technology Failure	
	MEDIUM	HIGH	HIGH	
3	– 3 – Implementations	– 6 – Research and development	– 9 – Security Breach	
Risk	Likelihood (1-5) Severity	Risk Rating (Acceptable, Un	desireable, and Intolerable) Acti	ion
echnician Repairs	1 A	1A		ep up with repa
Obtaining Parts for Repair	3 A	3A		ke sure all part
ollow-up Appointments nplementations	2 U 3 A	2U 3A		ate a schedule lowing through
Security Breach	9 I	91		ecking up on fir
Competiton	4 U	6U		mparing and

AW MODULE 4

Research and Development

2 U

REQUEST:

Employee Reliability

Technology Failure

MY SUGGESTION IS TO WRITE AT LEAST 10 QUESTIONS PER PERSON PRIOR TO THE MEETING. MAKE SURE THAT YOU USE OPEN-ENDED QUESTIONS (AT LEAST 7 QUESTIONS) TO GET THE EMPLOYEES TALKING. YOU SHOULD ALSO USE CLOSED RESPONSE AND RANGE OF RESPONSE QUESTIONS. I FIND THAT EACH TYPE OF QUESTION CAN PROVIDE VALUABLE INFORMATION AND ARE QUITE USEFUL IN REQUIREMENTS GATHERING.

21

PLEASE SEND THE QUESTIONS TO ME FOR AT LEAST TWO OF THE INTERVIEWS. I'D LIKE TO SEE WHAT YOU ARE PLANNING TO DISCUSS.

WE HAVE PREVIOUSLY USED BOTH THE JOINT APPLICATION DEVELOPMENT TECHNIQUE AND THE RAPID APPLICATION DEVELOPMENT TECHNIQUE. HOWEVER, MANY COLLEAGUES OF MINE SWEAR BY THE AGILE TECHNIQUE. EACH OF THESE METHODOLOGIES OFFER UP SOME GREAT ADVANTAGES. SINCE WE NEED TO GET THIS PROJECT DONE AS QUICKLY AS POSSIBLE, WHICH OF THESE TECHNIQUES DO YOU THINK WE SHOULD USE? I WANT TO ENSURE THAT WE'VE CREATED SOFTWARE THAT WILL HANDLE ALL OF OUR USERS' REQUIREMENTS AND THAT IT IS A ROBUST SYSTEM.

Create surveys to see how employees like their job

Keeping technology updated

Frequently updating business objctives

I ALMOST FORGOT TO MENTION THAT YOU'LL WANT TO ALSO SEND A QUESTIONNAIRE OUT TO THE USERS OF THE PROPOSED SYSTEM. DID YOU WANT TO SEND THE QUESTIONNAIRE TO ALL THE USERS OR DO YOU WANT TO DO A STRATIFIED OR SYSTEMATIC SAMPLE?

PLEASE SEND YOUR DRAFT QUESTIONNAIRE TO ME BEFORE YOU DISTRIBUTE.

DELIVERABLE 1:

HELLO CARLIE.

I THINK THAT INTERVIEWS ARE A FANTASTIC IDEA! WE THINK IT WOULD BE VERY VALUABLE TO INTERVIEW EMILY JOHNS (SERVICE MANAGER- APPLIANCE WAREHOUSE) AND MADDOX FAIRLEY (DIRECTOR, PARTS DEPARTMENT). LINKED BELOW IS A LIST OF QUESTIONS WE WOULD LIKE TO ASK THEM.

APPLIANCE WAREHOUSE STAFF INTERVIEWS (MODULE 4) (1).DOCX

THE QUESTIONS ARE ALSO LISTED BELOW-STAFF INTERVIEW- EMILY JOHNS (SERVICE MANAGER- APPLIANCE WAREHOUSE)

- 1. WHAT IS THE ONE THING YOU WISH YOU HAD KNOWN ABOUT WORKING IN A DEPARTMENT LIKE THIS WHEN YOU STARTED?
- 2. PLEASE LIST THREE THINGS THAT THE NEW SYSTEM MUST ABSOLUTELY HAVE TO BE SUCCESSFUL IN TERMS OF TECHNICAL CAPABILITIES?
- 3. DO YOU HAVE ANY THOUGHTS ABOUT THE CURRENT STATE OF YOUR STAFF? IS IT ADEQUATE TO LAUNCH?
- 4. GIVEN YOUR EXPERIENCE, WHAT WOULD YOU SAY IS A REASONABLE EXPECTATION FOR GROWTH/PROFITABILITY FOR THE SERVICE DEPARTMENT OVER THE FIRST THREE YEARS? FIVE YEARS?
- 5. CAN YOU NAME THREE AVOIDABLE, UNFORCED ERRORS THAT COULD BE MADE DURING BUILD ON THE LAUNCH OF A NEW DEPARTMENT LIKE THIS AND HOW WOULD YOU GO ABOUT AVOIDING THEM?
- 6. IS THERE A PARTICULAR SOFTWARE SUITE OR PACKAGE THAT YOU HAVE WORKED WITH THAT YOU WOULD RECOMMEND/PREFER?
- 7. DO YOU FIND THAT FOOT OR WEB TRAFFIC WERE MORE IMPORTANT TO BUILDING THE SUCCESS OF THE SERVICE DEPARTMENT?
- 8. WERE YOU RESPONSIBLE FOR MARKETING THE SERVICE DEPARTMENT AT ANY OF YOUR PREVIOUS STOPS AND IF SO, CAN YOU PROVIDE ANY INSIGHTS ON HOW BEST TO PROCEED WITH THAT PART OF THE LAUNCH?
- 9. IN YOUR EXPERIENCE, WHAT ARE THE ADVANTAGES OF A POINT OF SALE-BASED SERVICE PLAN AS OPPOSED TO ONE BASED ON NEED-BASED OFFERINGS?
- 10. IS THERE ANYTHING WE SHOULD KNOW ABOUT INSURANCE, BONDING OR REGULATIONS REGARDING OUR SERVICE TECHS?

STAFF INTERVIEW- MADDOX FAIRLEY (DIRECTOR, PARTS DEPARTMENT)

- 1. AS SOMEONE WHO HAS WORKED FOR APPLIANCE WAREHOUSE, WHAT ARE YOUR THREE BIGGEST CONCERNS ABOUT ADDING THE NEW SERVICE DEPARTMENT?
- 2. HAVE YOU EVER WORKED SOMEWHERE THAT OFFERED A SERVICE PROGRAM LIKE THE ONE APPLIANCE WAREHOUSE IS PROPOSING TO ADD?
- 3. PLEASE DISCUSS HOW YOU FEEL ADDING THE SERVICE DEPARTMENT WILL AFFECT YOUR DEPARTMENT'S PAYROLL NEEDS.
- 4. DO YOU HAVE ANY CONCERNS ABOUT THE TECHNICAL CAPABILITIES OF YOUR CURRENT STAFF REGARDING INTERACTING WITH THE NEW SYSTEMS BEING ADDED TO SUPPORT THE SERVICE DEPARTMENT?
- 5. HOW DO YOU FEEL THE ADDITION OF THE SERVICE DEPARTMENT WILL AFFECT YOUR ON-HAND INVENTORY LEVELS?
- 6. DOES THE PARTS WAREHOUSE HAVE ENOUGH ROOM TO ACCOMMODATE ANY INCREASE IN ON-HAND INVENTORY NECESSARY TO SUPPORT THE SERVICE DEPARTMENT?
- 7. WILL THE PARTS WAREHOUSE'S CURRENT INVENTORY TRACKING SYSTEM BE ABLE TO MESH WITH ANY ADDITIONAL SYSTEMS ADDED TO SUPPORT THE SERVICE DEPARTMENT?
- 8. DO YOU SEE ANY POTENTIAL PROBLEMS WITH THE SERVICE DEPARTMENT HAVING THEIR OWN PARTS PERSON OUTSIDE OF YOUR DIRECT REPORT GROUP?
- 9. IS THERE ANY OPPORTUNITY TO TRANSLATE THE INCREASED PART DEMANDS INTO VOLUME DISCOUNTS WITH OUR SUPPLIERS?
- 10. DO YOU HAVE ANY IDEAS OR THOUGHTS ON HOW WE CAN KEEP OUR ON-HAND PARTS INVENTORY LOW WHILE STILL BEING ABLE TO MEET OUR SERVICE OBLIGATIONS?

HAVE A GREAT EVENING! FRED

DELIVERABLE 2:

HELLO CARLIE,

A GENERAL QUESTIONNAIRE IS A GREAT IDEA. I HAD A COUPLE OF MEMBERS OF MY TEAM PUT SOMETHING TOGETHER THAT WE THINK WOULD WORK FOR GENERAL USE AMONGST SALES, PARTS AND SERVICE STAFF. PLEASE HAVE A LOOK AND LET US KNOW IF YOU THINK IT IS READY FOR DISTRIBUTION. THE FORM IS LINKED BELOW AND THE QUESTIONS ARE LISTED AFTER.

STAFF QUESTIONNAIRE

1.ON A SCALE FROM 1-5, HOW DO YOU FEEL ABOUT THE SYSTEM'S ANALYST PLAN SO FAR IN THE IMPLEMENTATION FOR THIS SYSTEM? IF YOUR RATING IS LOW, PLEASE EXPLAIN WHY AND WHAT CAN WE DO TO IMPROVE THE SKETCHING OF THIS PROJECT?

2.DO YOU BELIEVE THAT IN THE WORKING OF THIS NEW PROJECT APPLIANCE REPAIR TECHNICIANS, SERVICE MANAGERS, WEB APPLICATION DEVELOPERS, AND SYSTEM ANALYST'S WORKLOAD MIGHT BE AFFECTED? IF SO HOW AND WHAT CAN WE DO TO BALANCE THEIR SCHEDULES?

3.IN WHAT WAYS DO YOU BELIEVE THIS NEW SYSTEM ONCE ESTABLISHED MIGHT IMPACT OUR COMPANY?

4.HOW SATISFIED ARE YOU WITH THE COMPANY'S WARRANTY PROGRAM? DO YOU BELIEVE WE SHOULD ADD THIS PROGRAM FOR THE NEW SYSTEM ONCE, IT GOES OUT TO SALE? IF SO, WHY? WHAT DID YOU LIKE ABOUT THE PROGRAM?

5.WHAT IS YOUR OPINION ON ADDING A FORM OF MOBILE ACCESS TO SCHEDULING AND HOW DO YOU THINK IT WILL BENEFIT YOU AS AN EMPLOYEE?

6.WHAT NOTE TAKING PROCESS FOR CUSTOMER ISSUES WOULD YOU RECOMMEND? HOW DO YOU THINK IT SHOULD BE IMPLEMENTED?

7.HOW SHOULD REMINDER SERVICES BE RELAYED? WOULD YOU RECOMMEND CALL, TEXT, OR ONLINE REMINDERS?

8.HOW, WOULD YOU RATE THE CURRENT PREVENTATIVE MAINTENANCE IN YOUR DEPARTMENT?

9.HOW, WOULD YOU HELP A NEW USER WHO IS HAVING TROUBLE WITH OUR NEW SYSTEM WHEN IT BECOMES OFFICIAL?

10.DO YOU BELIEVE WE SHOULD OFFER DISCOUNTS TO SENIOR CITIZENS AND CUSTOMERS WITH MILITARY STATUS WHO PLAN TO PURCHASE OUR SYSTEM WHEN IT GOES OUT FOR SALE? IF SO, HOW MUCH DISCOUNT.

11.HOW, DO YOU BELIEVE THE PARTS/REPAIR DEPARTMENT SHOULD KEEP TRACK OF THE PARTS FOR THE SYSTEM WE PLAN TO BUILD? PLEASE EXPLAIN YOUR THOUGHTS.

THANKS! FRED

AW MODULE 5

REQUEST 1:

YOU SHOULD CREATE A DATA FLOW DIAGRAM (DFD). THIS DIAGRAM WILL HELP THE PROGRAMMERS UNDERSTAND HOW INFORMATION IS FLOWING THROUGH THE PROPOSED SYSTEM. I SUGGEST THAT YOU USE THE NOTES FROM THE JAD SESSION. THEY HAVE IDENTIFIED THE ENTITIES AND PROCESSES AND YOU CAN USE THIS INFORMATION TO CREATE A CONTEXT DIAGRAM.

PLEASE HAVE THIS DONE BY OUR NEXT MEETING. CARLIE

REQUEST 2:

CREATE A DECISION TABLE FROM THESE RULES. I WOULD LIKE TO SEE YOUR FIRST PASS AT THIS BY OUR NEXT SCHEDULED MEETING.

THANKS!

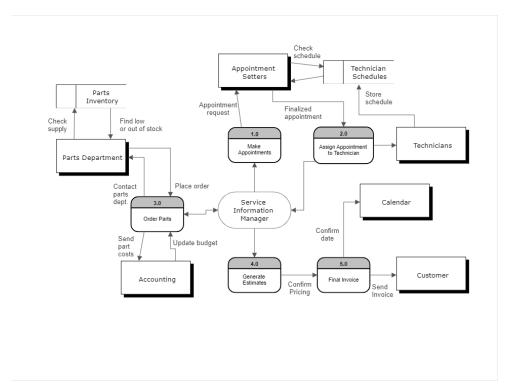
REQUEST 3:

NICE WORK ON THE DECISION TABLE! NOW YOU'LL NEED TO SIMPLIFY THE DECISION TABLE SO THAT YOU CAN CREATE A DECISION TREE. THE PROGRAMMERS FIND IT VERY HELPFUL TO HAVE ALL THE DECISIONS LAID OUT IN A DECISION TREE.

DELIVERABLE 1

HELLO CARLIE,

WE HAVE MANAGED TO CREATE A DATA FLOW DIAGRAM THAT SHOULD HELP VISUALIZE THE PROCESSES OF ALL AVAILABLE SYSTEMS. IF THERE ARE ANY CHANGES NEEDED, PLEASE LET ME KNOW, THANK YOU.



DELIVERABLE 2

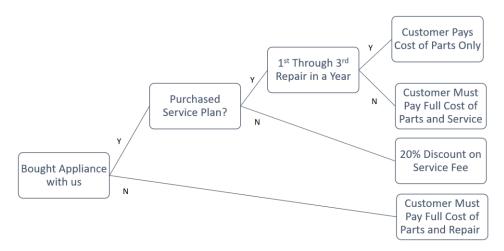
HELLO CARLIE,

THE DECISION TABLE HAS BEEN MADE AND IS READY FOR OUR NEXT MEETING. IT ENCOMPASSES THE RULES FOR THE SIM SYSTEM AS NEEDED, BUT IF THERE IS ANYTHING ELSE THAT NEEDS REVISING LET ME KNOW, THANK YOU.

Decision Table				Rules in the SIM systen		stem
		1	2	3	4	
Bought Appliance With Us	Y	١	Y	Υ	N	
Service plan	Y	١	Y	N	-	
First Through Third Repair in a Year	Y		N			
Fourth Appliance Repair in a Year	-	١	Y	-	-	
Customer Pays Cost of Parts Only	X					
20% Discount on service fee				X		
Customer Must Pay Full cost of parts and	service	2	X		X	

DELIVERABLE 3 HELLO CARLIE,

OUR TEAM HAS MANAGED TO CREATE A MORE SIMPLIFIED VERSION OF THE DECISION TABLE, AS YOU REQUESTED. THE DECISION TREE SHOULD BE A LOT MORE UNDERSTANDABLE FOR OUR PROGRAMMERS AND IF THERE IS ANYTHING ELSE THAT NEEDS TO BE ADDED, FEEL FREE TO LET ME KNOW, THANK YOU.



AW MODULE 6

REQUEST 1:

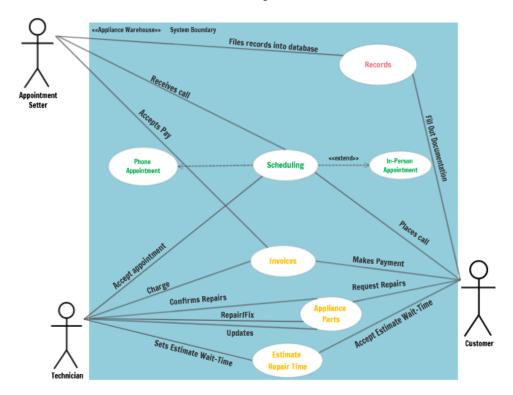
NOW THAT THE DFD HAS BEEN CREATED, IT IS TIME TO BUILD AN OBJECT MODEL FOR OUR NEW SYSTEM. WHEN THINKING ABOUT SIM'S OBJECTS, USE THE ENTITIES ALREADY IDENTIFIED: THE TECHNICIANS, CUSTOMERS, AND APPOINTMENT SETTERS. SINCE SIM IS ALSO INTERFACING WITH THE PARTS DEPARTMENT, IT IS IMPORTANT TO USE THAT DEPARTMENT ALSO AS AN ENTITY.

ALSO, CREATE A USE CASE DIAGRAM. MAKE SURE TO IDENTIFY THE ENTITIES AS ACTORS AND SHOW THE INTERACTION BETWEEN EACH OF THE ACTORS. BE SURE TO IDENTIFY AT LEAST TWO PROCESSES AND SHOW ALL THE ACTIONS BETWEEN THEM. DON'T FORGET TO INCLUDE A SYSTEM BOUNDARY SO WE CAN DETERMINE WHICH ACTIONS OCCUR WITHIN THE SYSTEM AND WHICH ARE EXTERNAL TO SIM.

DELIVERABLE 1

HELLO CARLIE,

THE TEAM HAS MADE A USE CASE DIAGRAM TO BETTER IDENTIFY THE SYSTEM PROCESSES AND HOPEFULLY IT WILL BE BENEFICIAL FOR OUR DEVELOPERS. IT ALSO MEETS ALL THE PARAMETERS YOU REQUESTED AND IS READY FOR YOUR APPROVAL.



NOTE: WITH EACH ONE OF YOUR DELIVERABLES PLEASE RESPOND TO THE EMAIL DIRECTLY. THIS WILL BE DONE FOR EACH SECTION OF DELIVERABLES. THIS IS A LIVING DOCUMENT AND WILL REQUIRE UPDATING TEAM LEADS AND THE DATES/MODELS.

AW MODULE 7

REQUEST 1:

YOU'VE DONE A GREAT JOB MODELING OUR NEW SIM SYSTEM! I'D LIKE TO CONSIDER THE POSSIBILITY OF AN OFF-THE-SHELF SOLUTION. LET'S SEE WHAT SOFTWARE IS OUT ON THE MARKET. I'D LIKE YOU TO RESEARCH SERVICE CENTER SOFTWARE AND MAKE A LIST OF EACH PACKAGE'S FUNCTIONALITY. MAKE SURE TO GATHER THE COST INFORMATION FOR EACH PACKAGE WHILE RESEARCHING.

CONCURRENTLY, YOU SHOULD CALCULATE HOW MUCH THIS SOFTWARE WOULD COST US TO BUILD IN-HOUSE.

REQUEST 2:

NOW THAT YOU'VE GATHERED THE COSTS FOR THE IN-HOUSE BUILD AND THE OFF-THE-SHELF SOFTWARE, IT'S TIME TO DECIDE WHICH APPROACH YOU THINK IS BEST FOR APPLIANCE WAREHOUSE.

ONCE THE DECISION IS MADE, CREATE A PERSUASIVE PRESENTATION (USING PRESENTATION SOFTWARE) EXPLAINING WHY THE SELECTED BEST (PRE-PACKAGED VS. IN-HOUSE BUILT) SOFTWARE IS BETTER THAN THE OTHER. YOU WILL BE PRESENTING THIS SLIDE DECK TO THE OWNER AND STORE MANAGER.

MAKE SURE TO SEND ME YOUR RESEARCH AND SLIDE DECK BEFORE YOUR PRESENTATION.

DELIVERABLE 1:

HELLO CARLIE,

SYSTEM ANALYSTS, HAYES DID SOME VERY WELL RESEARCH ON THE SOFTWARE PACKAGES COSTS, PROS AND CONS. AFTER HIS RESEARCH HE HAS CREATED A SPECIAL PRESENTATION DEMONSTRATING ALL OF HIS FINDINGS AND THOUGHTS ON WHICH PACKAGE IS THE BEST AND WHY.

I HOPE MR.MAE ROTH, MR. FARLEY AND YOU ENJOY THE PRESENTATION. HAVE A NICE DAY,

MISS PARKOFF

APPLIANCE WAREHOUSE IN-HOUSE-VS-OFF-THE-SHELF.PPTX

***THIS LINK GIVES YOU ACCESS TO THE POWERPOINT. I SEND IT TO DR. WASHINGTON, THE SYSTEM ANALYSTS CHIEF EXECUTIVE OF APPLIANCE WAREHOUSE

REQUEST 1:

YOUR RESEARCH ON OFF-THE-SHELF SYSTEMS HAS GOT ME THINKING ABOUT SOFTWARE AS A SERVICE SOLUTIONS VS. INSTALLED SOFTWARE. WHICH TYPE OF SOLUTION DO YOU THINK WOULD BE BEST FOR APPLIANCE WAREHOUSE? I KNOW THAT MY FRIEND AT THE NSA DOESN'T LIKE SAAS SYSTEMS. WHAT DO YOU THINK? LET ME KNOW YOUR THOUGHTS ON THIS.

THANKS.

DELIVERABLE 1: GOOD MORNING, CARLIE,

HOPEFULLY YOU ARE DOING WELL. HERE'S MR. JAMIESON'S PERSPECTIVE ON THE SOFTWARE THAT SHOULD BE USED IN THE WAREHOUSE INCLUDING, HIS THOUGHTS ON THE SAAS SYSTEM. HE ALSO WILL PRESENT YOU WITH HIS RESEARCH FINDINGS ON BOTH THE PACKAGES.

THANKS,

Type of Software for Application Warehouse

- 1. Which type of software do you think would be best for Appliance Warehouse?
 - a. Installed software. Software that is owned instead of one that works on a subscription service model allows for more customization, fine tuning, and stays at one fixed cost instead of a running balance. Licenses can have a higher upfront cost, but it is one that can be paid on. Installed software is easier to customize to our own specific needs as well, such as adding new features or expanding on existing ones inside the program.
 - b. One downside could be the lack of an official support team. With installed software, the easier option for finding assistance is through help menus and manuals, unlike service software which may have a dedicated support team to call and receive instant assistance.
- 2. What are your thoughts on a SaaS system?
 - a. Software as a service is a compelling and competitive system design for many companies. Though the payment is longer term, software tends to be updated more regularly, and is typically a lot better with newer additions like cloud computing to access the service anywhere. As mentioned previously, support teams are much more prevalent in these systems, allowing for quick responses to issues. It is also less intensive to keep up with, as the system is handled by another company, but that also provides issues as well.
 - b. Some cons of SaaS are the lack of customization options, the ongoing expense, and unavoidable technical issues. The SaaS model makes it hard to tailor specific systems to exactly the way that a company may want they will typically be a lot more general and rounded, instead of focused on one specific task that they are initially purchased for. They may also not have all the options one needs and may result in extra expense to cover for that. The ongoing expense can outpace the pricetag of a traditional software license as well over time. Finally, the service may go down if the providing company undergoes issues, creating a big bottleneck in the company who uses that SaaS system.

MISS PARKOFF

REQUEST 1:

I JUST CAME OUT OF A MEETING WITH THE STORE MANAGER AND SERVICE MANAGER. THEY ARE GETTING QUITE ANXIOUS FOR US TO BUILD OR BUY THIS SOFTWARE.

AND I AM OVERWHELMED WITH ALL THE FUNCTIONALITY POSSIBLE FOR SIM. FROM THE QUESTIONNAIRE RESULTS AND YOUR OFF-THE-SHELF SOLUTIONS RESEARCH, WHAT DO YOU THINK ARE OUR MUST-HAVES FOR SYSTEM FUNCTIONALITY? ALSO, WHAT ADDITIONAL FUNCTIONALITY WOULD BE NICE-TO-HAVE BUT IS NOT ABSOLUTELY REQUIRED FOR OUR NEW SYSTEM?

PLEASE PROVIDE THIS LIST BEFORE YOU LEAVE FOR THE WEEKEND. HAVE A GREAT WEEKEND!

DELIVERABLE 1: DEAR CARLIE,

VALERIA CREATED A LIST WITH THE POSSIBLE FUNCTIONALITIES FOR THE SYSTEM IN PROGRESS AND IT'S MUST HAVE'S.

PLEASE LET ME KNOW, IF YOU NEED ANYTHING ELSE.

MUST-HAVES

- SCALABILITY
 - O THE SYSTEMS TECHNOLOGY SHOULD BE ABLE TO ADAPT TO NEW CHANGES.
- SECURITY
 - O SECURITY MUST PROTECT ITS DATA; ALL INFORMATION MUST BE SECURED.
- · WINDOWS AND MAC
 - O THE SYSTEM SHOULD WORK ON BOTH WINDOWS AND MAC, SO IT CAN BE USED ON ALL SYSTEMS.
- OPERATING
 - O THE SYSTEM SHOULD OPERATE 7 DAYS A WEEK AND 365 DAYS A YEAR.
- EASY-TO-USE
 - O $\,$ THE SYSTEM SHOULD BE EASY-TO-USE FOR ALL USERS, EMPLOYEES, AND CUSTOMERS.
- · CALENDAR
 - O THE SYSTEM SHOULD INCLUDE A CALENDAR WITH INFORMATION ABOUT APPOINTMENT TIMES AND AVAILABILITY FOR USERS.
- SCHEDULING
 - O CUSTOMERS SHOULD BE ABLE TO SCHEDULE APPOINTMENTS THROUGH THE SITE.
- · SERVICE CALL REMINDERS
 - O CUSTOMERS SHOULD RECEIVE A SERVICE CALL REMINDING THEM OF THEIR APPOINTMENT 24 HOURS BEFORE THEIR APPOINTMENT.

RECOMMENDATIONS

- FRESHDESK
 - O LOW INITIAL EXPENSE
 - § \$15/AGENT/MONTH + \$75/MONTH FOR 1000 BOT SESSIONS / MONTH
 - § 10 AGENT ACCOUNTS = \$2700 PER YEAR
 - O QUICK TO IMPLEMENT SOLUTIONS
 - § COULD BE ACHIEVED IN UNDER TWO MONTHS
 - O MANY FEATURES
 - § EMAIL AND SOCIAL TICKETING

- § TICKET DISPATCH
- **§ KNOWLEDGE BASE**
- § TICKET TREND REPORT
- § DATA CENTER LOCATION
- § TEAM COLLABORATION
- § AUTOMATION
- § COLLISION DETECTION
- § MARKETPLACE APPS
- § HELPDESK REPORT
- § SLA & BUSINESS HOUR
- **§ CUSTOM EMAIL SERVER**
- § CUSTOM TICKET VIEWS
- § TICKET FIELDS AND STATUS
- **§ CUSTOMER FIELDS**
- § CUSTOM SSL
- O TOP 10 CLOUD PROVIDER

HAVE A GREAT WEEKEND:)

MISS PARKOFF

AW MODULE 8

REQUEST 1:

AFTER YOUR PRESENTATION LAST WEEK, THE MANAGER THINKS AN IN-HOUSE SOLUTION IS THE WAY TO GO. ALTHOUGH OUR PROGRAMMERS HAVE MUCH EXPERIENCE WITH SYSTEM INTEGRATION AND DEVELOPMENT, THEY HAVE LITTLE EXPERIENCE WITH USER DESIGN. YOU'LL HAVE TO LAY OUT ALL THE PAGES OF THE SYSTEM. FOR NOW, JUST CREATE A HIERARCHICAL DRAWING OF ALL THE PAGES NEEDED FOR THIS SYSTEM. THINK OF THE MENU ON THE TOP OF THE SCREEN AND WHAT YOU'D CLICK ON TO MOVE TO THE NEXT SCREEN.

ONCE YOU FINISH THE HIERARCHY, I'LL NEED YOU TO DRAW OUT EXAMPLES OF A FEW OF THE SCREENS. FOR EXAMPLE, SHOW A SCREEN WITH A MENU, ANOTHER WHICH REQUESTS USER INPUT, ONE THAT HAS METHODS TO CONTACT US, AND THE LAST ONE AS AN INFORMATIONAL PAGE. THE MENU SCREEN CAN BE AN OPENING PAGE OR EVEN A PAGE TO DECIDE ON TYPES OF REPORTS TO RUN. THE USER INPUT PAGE CAN BE ONE FOR ANY OF THE USERS, SUCH AS THE APPOINTMENT SETTERS OR TECHNICIANS. MAKE SURE THAT YOU OUTLINE ALL OF THE REQUIRED VALIDATION RULES FOR THIS INPUT PAGE. THE INFORMATIONAL PAGE CAN EITHER BE A STATIC PAGE OR RESULTS FROM A SEARCH. MAKE SURE THAT YOU INCLUDE NAVIGATION BUTTONS ON EACH OF THESE EXAMPLE PAGES.

I THINK IT WOULD BE A NICE TOUCH TO INCLUDE OUR LOGO ON ALL OF THESE SCREENS.

DELIVARABLE 1:

HI CARLIE,

NO PROBLEM, CARLIE. CADE HAS CREATED A NICE HIERACHIAL DRAWING OF THE SITE PAGES FOR THE COMPANY. I THINK YOUR GOING TO LIKE IT.

PLASE LET ME KNOW IF THEIR'S ANYTHING ELSE YOU'LL LIKE ON IT.

THANKS,

MISS PARKOFF

MAIN PAGE



Your Ultimate Source for Home Goods

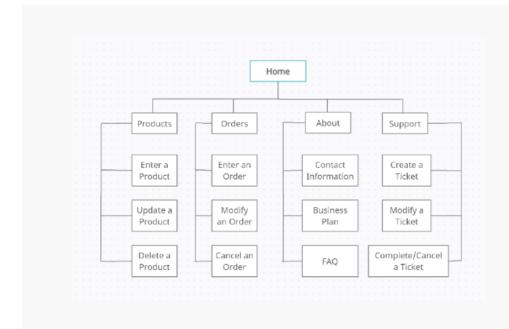
About Appliance Warehouse

Appliance Warehouse is a warehouse store filled with brand name appliances and appliance replacement parts. We are the largest appliance store this side of the Mississippi. We have every home appliance and replacement part you'll ever need!

Our Mission

We are your one stop shop for all of your home appliances and parts!

Get in Touch



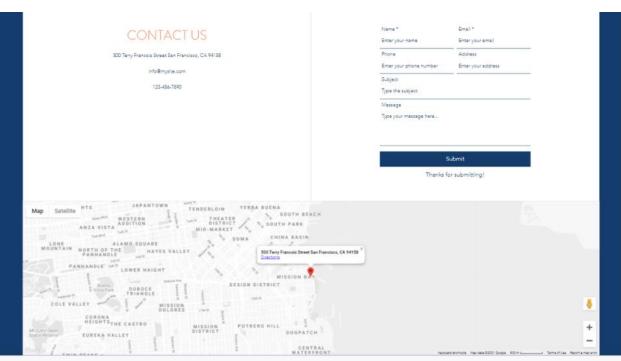


APPLIANCE WAREHOUSE LOGO

NAVIGATION BARS

CONTACT INFO





WEBSITE PRODUCT SECTIONS



REQUEST 1:

THE DEVELOPERS WANT TO KNOW IF THIS NEW APPLICATION SHOULD RUN ON A MOBILE PLATFORM. IF SO, THEY WANT TO KNOW IF IT SHOULD BE CREATED WITH RESPONSIVE WEB DESIGN? WHAT DO YOU THINK WOULD BE THE BEST AND WHY?

I WAS WONDERING IF PROTOTYPING THIS SYSTEM MIGHT BE MORE EFFECTIVE. WHAT ARE THE ADVANTAGES AND DISADVANTAGES TO THIS APPROACH?

PLEASE GIVE ME YOUR THOUGHTS ON THESE ITEMS BY THE END OF THE DAY TODAY.

THANKS.

DELIVARABLE 1:

GOOD AFTERNOON, CARLIE,

SOUNDS GOOD! SARAH HAS CONDUCTED SOME THOROUGH RESEARCH ON THE MOBILE PLATFORM AND PREVIEWED MR. SCHULE'S WEBSITE HIERARCHIAL. AFTER, PREVIEWING IT AND RESEARCHING SHE HAS BEEN ABLE TO COME TO A DECISION ON WHETER THE DESIGN SHOULD BE CREATED WITH RESPONSIVE DESIGN AND THE CONS AND PROS TO IT.

HERE IS HER REPORT ON IT.

VERY RESPECTFULLY,

MISS PARKOFF

Developers want to know if this new application should run on a mobile platform. If so, they want to know if it should be created with responsive web design? What do you think would be the best and why?

I believe that this new application should be run on a mobile platform due to the growing interest and use of technology today. With the increasing want for accessibility and accommodation appliance warehouse should create a mobile platform. The best fit for this mobile platform would be the responsive web design due to its compatibility on multiple devices, duet to the fact that it would allow for the program to "flow" on each device that is being used instead of struggling with operating it on something else other than a computer. It also allows users to use this program independently and with ease. Meaning that responsive web design would be the best thing to implement if the company were to run on a mobile platform.

I was wondering if prototyping this system might be more effective. What are the advantages and disadvantages to this approach?

Yes, the use of prototyping this system would be more effective in implementing this new system. However, there are going to be some major advantages and disadvantages that need to be acknowledged before implementing prototypes. Some of the advantages of prototyping this system would be users and developers can avoid misunderstandings, it can be more effectively evaluated than paper selection, and it reduces the risk of financial exposure that can occur if a business fails to help support the needs of the business. Some of the disadvantages that are worth noting are the quality problems that can be uncovered at the end of the finished operational system, testing reliability and maintainability cannot be tested adequately, using a wide range of systems can become difficult to manage.

Mobile Platform Report

REQUEST 1:

DON'T FORGET THAT WE HAVE A LUNCH SCHEDULED ON FRIDAY AT THE CORNER DELI. IT SHOULD BE FUN!

I KNOW I'VE ASKED FOR SOME OTHER MOCKUPS THIS WEEK BUT COULD YOU ALSO MOCKUP SAMPLES OF THREE DIFFERENT REPORT TYPES (DETAIL, EXCEPTION, AND SUMMARY)? MAE IS HAVING A DIFFICULT TIME VISUALIZING HOW ONE OF HER SUMMARY REPORTS WOULD LOOK LIKE. ALSO, MADDOX FARLEY WANTS TO KNOW WHAT THE PARTS REPORT WILL LOOK LIKE THAT HE WILL BE USING SEVERAL TIMES A DAY.

HOW DO YOU PLAN ON DISTRIBUTING EACH OF THESE REPORTS WHEN SIM IS UP AND RUNNING?

IF YOU COULD GET ME THESE SAMPLES SOON, I'D APPRECIATE IT. I'M MEETING WITH MAE AND MADDOX FIRST THING ON THURSDAY.

THANKS.

DELIVERABLE 1

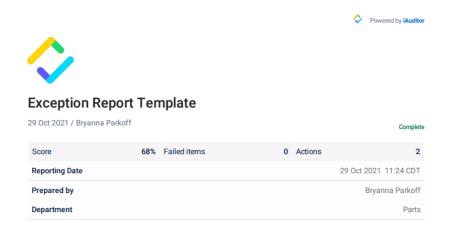
HI CARLIE! COUNT ME IN. THANKS FOR THE INVITATION TO THE CORNER DELI. CAN'T WAIT TO SEE YOU ALL THERE! I HAVE PREPARED THREE MOCKUP SAMPLES: EXCEPTION, DETAIL AND SUMMARY REPORT INCLUDING, A SPECIFIC ONE FOR MR. FARLEY AND MRS.ROTH.

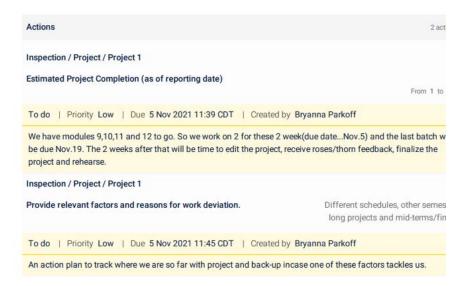
I HOPE THEY COME IN HANDY FOR THEM AND THE SYSTEM DEVELOPMENT TEAM! THANKS.

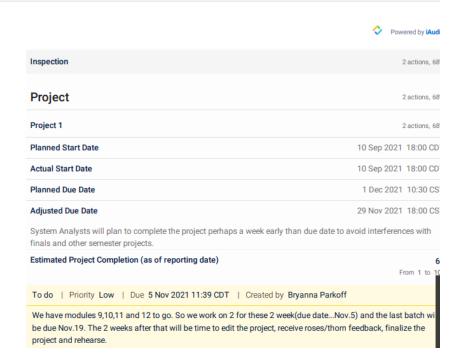
MISS PARKOFF

***NOTE: DR. WASHINGTON HAS RECEIVED THE OFFICIAL COPY OF THE DETAIL REPORT BECAUSE IT IS A BIG REPORT LIKE THE POWERPOINT MR. HAYES CREATED.

DELIVARABLE 2: EXECEPTION REPORT







Recommendations and requests (so that work can be completed)

System Analysts will like to request the continuation of workshop days once a week in the appliance warehouse or for the last 30 minutes of work shift. This has shown to help with the teams productivity and it's a great slot of time to take advantage of.

Provide photo evidence and documentation (if necessary and applicable)

Full name and signature of employee

Bryanna Parkoff, Cade Schule, Sarah Munn, Fred Hayes, Valeria Rodriguez & Anthony Jamieson

DELIVERABLE 3:

SUMMARY REPORT FOR MRS.ROTH

Test Summary Report Template

Test Summary Report Identifier

Some type of unique company generated number to identify this summary report, its level and the level of software that it is related to. Preferably the report level will be the same as the related software level. The number may also identify whether the summary report is for the entire project or a specific level of testing. This is to assist in coordinating software and testware versions within configuration management.

Summary

Identify all relevant support materials so that the reader of the report knows which version and release of the project/software is being reported on. It may be particularly important to identify the specific version of an external package used in the testing, especially if a new release occurred during the test cycle and was not included. The version/release information should match the information contained in the configuration management system and may include the following elements.

- Test Items This should match the item definitions from the appropriate level test plan
 that this report is covering. Any variance from the items specified in the test plan should
 be identified. Elements from the features sections of the test plan (both included and
 excluded) can also be included here or in a separate reference section.
- Environment The environment and any variances for that identified in the test plan should be verified here to ensure that the correct test set-up was used. This will help avoid confusion when the product is released to production and will ensure that the test environment matches the destination platform.
- References Any documents that support this report and their location within the configuration management system.

DELIVARABLE 4:

REPORT FOR MR. FARLEY ON PARTS DEPARTMENT



AW MODULE 9

REQUEST 1:

IN THAT CASE, I NEED FOR YOU TO FOCUS ON THE ERD AND THE DATABASE DESIGN THIS WEEK.

WHEN YOU START THE ERD, BE SURE TO FOCUS ON THE ENTITIES PREVIOUSLY EMPLOYED WHEN CREATING THE DFD AND USE CASE DIAGRAM. THINK ABOUT ALL THE MAJOR ACTIVITIES BETWEEN EACH OF THESE ENTITIES AND DETERMINE THE TYPE OF RELATIONSHIP BETWEEN THE ENTITIES. REMEMBER, THE BEST TABLE RELATIONSHIPS ARE 1:1 OR 1: M. USE THE M: N RELATIONSHIPS SPARINGLY.

ONCE YOU HAVE CREATED THE ERD, YOU WILL BE DESIGNING THE TABLES FOR THE DATABASE IN 3NF.

REQUEST 2:

WANTED TO FURTHER CLARIFY THE DATABASE REQUIREMENT. AS I PREVIOUSLY STATED, THE DATABASE ADMINISTRATOR NEEDS THE NEW DATABASE IN 3NF. EACH TABLE SHOULD LIST ALL THE NECESSARY FIELDS. YOU SHOULD HAVE DONE SOME OF THIS WORK WHEN YOU CREATED THE USER INTERFACE SCREENS A FEW WEEKS AGO. HIGHLIGHT WHICH FIELD(S) IS/ARE THE PRIMARY KEY.

REQUEST 3:

ONCE YOU HAVE THE DATABASE CREATED, BE SURE TO PUT IN AT LEAST 3 RECORDS OF "DUMMY" DATA IN EACH OF THE TABLES. THIS WAY, WE CAN BETTER SEE THE SIZE AND DATA TYPES FOR EACH OF THE FIELDS.

YOU SHOULD USE SOME OF THE DATA IN THE DATA LIBRARY AS A GUIDE FOR YOUR SAMPLE DATA.

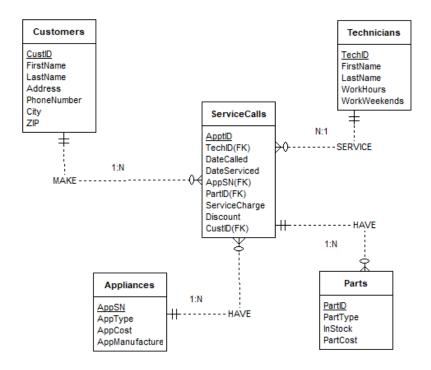
DELIVERABLES-RESPONSE (DELIVERABLES 1, 2, AND 3 INCLUDED): HELLO CARLIE,

OUR TEAM HAS READ AND WORKED ON YOUR REQUESTS FOR THE DATABASE SYSTEM AND WE HAVE PRODUCED THE DELIVERABLES THAT YOU HAVE ASKED FOR. WE HAVE PRODUCED AN ERD, THE TABLES TO BE USED, AND A DATABASE IN ACCESS WITH DUMMY DATA INCLUDED. THESE DELIVERABLES ARE ATTACHED BELOW. PLEASE LET US KNOW IF THERE IS ANYTHING ELSE YOU WOULD LIKE OR IF THERE WERE ANY EDITS YOU WOULD LIKE TO BE MADE. THANK YOU!

ANTHONY

DELIVERABLE 1:

APP WAREHOUSE ERD



DELIVERABLE 2:

TABLES

DELIVERABLE 3:

DATABASE IN ACCESS

AW MODULE 10

REQUEST 1:

I THINK THAT WE MIGHT NEED TO IMPLEMENT AN ENTERPRISE RESOURCE PLANNING SYSTEM TO BETTER COORDINATE ALL OF OUR VARIOUS DEPARTMENTS AND STORES. IN FACT, I THINK IT MIGHT MAKE SENSE TO IMPLEMENT THIS SYSTEM PRIOR TO THE SECOND STORE OPENING.

COULD YOU RESEARCH THE VARIOUS ERP SYSTEMS ON THE MARKET AND MAKE A RECOMMENDATION WHICH SYSTEM WE SHOULD CONSIDER? MAKE SURE TO COMPARE AT LEAST THREE SYSTEMS BEFORE MAKING A RECOMMENDATION.

REQUEST 2:

HOW SCALABLE DO WE NEED OUR NEW SYSTEM TO BE? WHAT SYSTEM REQUIREMENTS SHOULD WE ADD WITH REGARDS TO SCALABILITY ISSUES?

FURTHERMORE, HOW DO YOU THINK WE SHOULD SET UP OUR COMPUTER NETWORK? IS THERE A TOPOLOGY THAT YOU THINK WOULD BE MOST APPROPRIATE FOR AW? DO YOU THINK WE NEED ONLINE PROCESSING OR DO YOU THINK BATCH PROCESSING WOULD BE ADEQUATE?

REQUEST 3:

I'D LIKE FOR YOU TO THINK THROUGH THE CLASSES OF USERS (APPOINTMENT SETTERS, TECHNICIANS, PART DEPARTMENT, MANAGEMENT, CUSTOMERS) AND WHAT TYPE OF ACCESS THEY REQUIRE. ALSO, HOW DO YOU THINK WE NEED TO PROTECT THE TECHNICIAN'S MACHINES AND THE SERVER?

DELIVERABLES-RESPONSES:

HELLO CARLIE,

OUR TEAM HAS RUN THROUGH THE REQUESTS AND NEEDS OF OUR SYSTEM AND WORKED TO PUT TOGETHER SOME RESPONSES TO THE QUESTIONS YOU HAVE PROPOSED. ATTACHED BELOW ARE OUR ERP RECOMMENDATIONS, THOUGHTS ON SCALABILITY, AND OUR RECOMMENDATIONS ON SECURITY FOR THE UPCOMING SYSTEM. PLEASE LET US KNOW YOUR THOUGHTS. THANK YOU!

ANTHONY

DELIVERABLE 1:

ERP COMP	<u>ARISON</u>						
Appliance V	Warehouse ERP C	ompai	rison Doc				
Product	Deployment	CRM	Financial Management	HR Management	Inventory Management	Order Management	Supply Chain
Multiview ERP	Installed/Cloud		X		X	X	X
<u>NetSuite</u>	Mobile/Cloud	X	X	X	X	X	X
<u>DELMIAworks</u>	Installed/Mobile/Cloud	X	X	X	X	X	X
DELMIAworks. They of Appliance Warehous relevant areas of the tools and solutions to	offer multiple deployment optic e continues to grow and expand business from CRM tools to HR o cover it all. The other candidat	ons that wo I. They can , Supply Ch e I would o	perspective ERP partner would parant a greater level of flex also be active partners in all po- tain, and Order Management; the consider is NetSuite. They are a nnot recommend relying on the	ibility as otentially hey have nd Oracle			

DELIVERABLE 2:

SCALABILITY AND STRUCTURE-ALSO CAN BE FOUND IN MINDTAP.

DELIVERABLE 3:

SECURITY IN APPLIANCE WAREHOUSE

***THIS IS A LONG REPORT. TO RETRIEVE IT YOU CAN FIND IT UNDER AW MODULE 10 DELIVERABLES IN MINDTAP. THANK YOU.

AW MODULE 11

REQUEST 1:

OUR LEAD DEVELOPER WAS RECENTLY CERTIFIED IN SCRUM, ONE OF THE AGILE METHODOLOGIES, AND WOULD LIKE TO TRY TO MANAGE THIS PROJECT USING SCRUM. IN ORDER FOR HER TO DO THIS, SHE NEEDS US TO REWRITE THE REQUIREMENTS LIST YOU PREVIOUSLY CREATED AS USER STORIES. JUST TO REMIND YOU, A USER STORY

LOOKS LIKE THIS:

AS A < TYPE OF USER >, I WANT < FEATURE > SO THAT I CAN < FUNCTIONALITY >. FOR EXAMPLE: AS A TAXI DRIVER, I WANT DIRECTIONS SO THAT I CAN QUICKLY GET TO MY NEXT CUSTOMER.

PLEASE REWRITE ALL OF YOUR REQUIREMENTS AS USER STORIES AND I WILL PASS IT ON TO OUR DEVELOPMENT TEAM.

DELIVERABLE 1:

HELLO CARLIE.

ATTACHED HERE ARE ALL THE REQUIREMENTS THAT YOU NEED TO PASS ON TO YOUR DEVELOPMENT TEAM FOR THE SCRUM METHODOLOGY. LET ME KNOW OF THERE ARE ANY QUESTIONS. HAVE A NICE DAY!

THANKS,

SARAH

SCRUM METHODOLOGY:

AS A USER, I WANT SCALABILITY ON THE SYSTEM, SO IT CAN ADAPT TO ANY CHANGES.

AS A USER, I WANT SECURITY ON THE SYSTEM, SO MY INFORMATION CAN BE SECURED.

AS A USER, I WANT THE SYSTEM TO WORK ON WINDOWS AND MAC, SO I CAN ACCESS ON

ANY SYSTEM.

AS A USER, I WANT THE SITE TO BE AVAILABLE 7 DAYS A WEEK AND 365 DAYS A YEAR.

AS A USER, I WANT THE SYSTEM TO BE EASY-TO-USE.

AS A USER, I WANT A CALENDAR ON THE SYSTEM, SO I CAN VIEW APPOINTMENT TIMES

AND AVAILABILITY.

AS A CUSTOMER, I WANT TO BE ABLE TO SCHEDULE AN APPOINTMENT THROUGH THE

SITE.

AS A CUSTOMER, I WANT A SERVICE CALL REMINDING OF MY APPOINTMENT, SO I WON'T

FORGET ABOUT MY APPOINTMENT.

REQUEST 2:

THE DEVELOPERS HAVE REQUESTED TO VIEW YOUR TESTING PLAN FOR SIM. CAN YOU GIVE ME A SAMPLE OF THE TESTS YOU ARE PLANNING TO RUN? SHOW ME EXAMPLES OF THE UNIT TESTS, INTEGRATION TESTS, AND SYSTEM TESTS.

ALSO, HAVE YOU DEVELOPED THE TRAINING PLAN? WHO ARE YOU PLANNING TO TRAIN AND WHAT FUNCTIONALITY ARE YOU PLANNING TO TEACH THE DIFFERENT CLASSES OF USERS?

IT'S ALL STARTING TO COME TOGETHER NOW!

DELIVERABLE 2:

HELLO CARLIE,

YES, EVERYTHING IS REALLY COMING TOGETHER NOW! I HAVE GATHERED ALL THE NECESSARY INFORMATION FROM MY TEAM AND HAVE ATTACHED ALL THE SAMPLES OF TESTS THAT YOU HAVE ASKED FOR! ALSO ATTACHED HERE IS THE TESTING TRAINING PLAN AND EVERYONE WHO WE ARE THINKING OF TRAINING. IF THERE ARE ANY QUESTIONS OR CONCERNS, PLEASE LET ME KNOW.

THANS,

SARAH

Appliance Warehou				
For the internally developed				
IT Department	Cashiers	Sales Staff	Service/Parts Team	Management
System Architecture	POS Integration	Warranty Program/Pricing	System Overview	System Overview
User Management	Major System Functions	Repair/Service Guidelines	Scheduling	Key IT Contact People
Platform Integration	System Overview	System FAQ's	Parts Inventory Managemer	Reports and Analytics
System Documentation	Online and In-House Help		Service Guidelines	Cost/Benefit
Troubleshooting	Warranty Program		Online and In-House Help	User Training
User Help Desk Functions	Service Guidelines		Major System Functions	System FAQ's
Tode Base	System FAQ's		System FAQ's	
System FAQ's				
Supplemental Materials				
All topics covered in trainin				
Externally Developed Sy				
All training and support for				

Appliance Ware		
Test Type	Testing Action	Outcome
		Message to operator that the entered data is invalid or not found in the event of invalid entry.
Unit Test	Technician History and Schedule will be checked by entering information such as phone, employee number, and name	Message will be sent to scheduler/user that input was invalid or Technician Schedule/History info will be displayed
	Customer Repair History will be modfied using data input by the Repair Technician. The data input will be involve both valid and invalid data.	Back-end records will be update to reflect any changes, Invalid data will throw an error message and be logged for review
	Parts from inventory will be allocated to accommodate a repair request. Both parts known to be currently in inventory and those known to be out will be requested.	In the event that the part is out of stock, it will be automatically orderd and a message sent to the schedulers to adjust the repair appointment accordingly.
	Full addition of multiple new customers with several appliance and warranty purchases each will be made from the Appliance Warehouse POS	Data records checked and referenced to ensure that all is in order.
Systems Testing	Multiple repair requests will be fully simluated from the initial customer request through billing, scheduling, parts invetory, customer record updates as well as any post repair feedback or technician record updates.	Data records checked and referenced to ensure that all is in order including any potential system errors or breakdowns.

REQUEST 3:

AS WE NEAR THE END OF THE DEVELOPMENT STAGE FOR SIM, I HAVE IMPLEMENTATION QUESTIONS. HOW DO YOU PLAN ON ROLLING OUT THE NEW SIM SYSTEM? WHICH TECHNIQUE DID YOU DECIDE TO USE? WHY DO YOU THINK THIS THE BEST TECHNIQUE? PLEASE EXPLAIN THE RATIONALE FOR YOUR CHOICES.

HELLO CARLIE,

ATTACHED HERE IS A DOCUMENT PERTAINING TO THE QUESTIONS ASKED ABOUT IMPLEMENTING A NEW SYSTEM. I HOPE THIS ANSWERS ALL YOUR QUESTIONS, AND IF YOU HAVE ANY MORE QUESTIONS DO NOT HESITATE TO REACH OUT!

THANKS,

SARAH

DELIVERABLE 3:

As we near the end of the development stage for SIM, I have implementation questions. How do you plan on rolling out the new SIM system? Which technique did you decide to use? Why do you think this the best technique? Please explain the rationale for your choices.

I plan on rolling out the new SIM system by first preparing an operational and test environment, one environment to develop and maintain a system, and one separate environment to maintain security, and protect the original operational environment. After all of this is done and checked we then turn to the system change over in which we roll out the new system.

In order to rollout out the new system we should implement the phased operation, because it allows the new system to be implemented in stages rather than all at once or running simultaneously with the new system. It gets the user accustomed to using the system a little bit at a time so that way the user knows how to use it. For our older employees this will be a lot easier for them, so that way they can adjust slowly and not all at once.

I think that this is the best technique due to the operation being used in stages. I feel that it would best suit the company and all its users not to throw a whole new system at them all at once. The reason why I picked the phased system over the pilot system is not only because of the different ways that they are implemented but with pilot all the system is given to some users, while with phased it gives parts of the system to all the users. Which is easier for the employees to work with, and it is cheaper than some of the other systems.

AW MODULE 12

REQUEST 1:

OUR SYSTEM ADMINISTRATOR WAS ASKING ME ABOUT THE SECURITY FOR SIM. YOU AND I HAVE NOT DISCUSSED THIS TOPIC IN DEPTH. WE NEED TO DO A RISK ASSESSMENT AND LOOK AT ALL TYPES OF SECURITY ISSUES: PHYSICAL, NETWORK, APPLICATION, FILE, USER, AND PROCEDURAL.

MAKE A LIST OF THE SECURITY RISKS FOR ALL SIX SECURITY LEVELS. WE NEED TO MAKE SURE THAT WE DON'T LEAVE OUR NEW SYSTEM VULNERABLE TO ATTACKS. ALSO, WHAT IS THE BACKUP METHOD TO BE USED FOR SIM? PLEASE EXPLAIN WHY YOU'VE CHOSEN THIS METHOD.

HOPE YOU HAD A GREAT WEEKEND!

DELIVERABLE 1:

HELLO CARLIE,

I HAD A GREAT WEEKEND AND I HOPE THAT YOU DID TOO! I HAVE CONSULTED WITH MY TEAM AND CAME UP WITH THE FOLLOWING RISK ASSESSMENT, WHICH ALSO ACKNOWLEDGES WHY WE CHOSE THIS METHOD TO IMPLEMENT FOR SECURITY RISKS. LET ME KNOW IF THERE ARE ANY QUESTIONS.

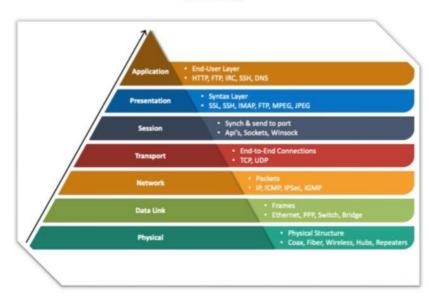
THANKS,

SARAH

Best Business Security Practices

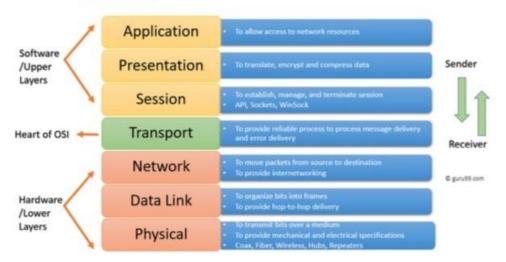
Created By System Analyst: Bryanna Parkoff

OSI MODEL



Although the chapter introduces us to the six levels of security, I've pondered on how
these layers actually fit into the OSI (Open Systems Interconnection Model). This model
actually includes a seventh layer of security which is found in the application layer of the
model portrayed to us in the chapter. Below I will go about introducing the seven layers
of the OSI and their milestones on how to prevent a system from being vulnerable to any
attacks.

What are the seven security levels?



Level 1: Physical Layer

We need to know the architecture of our developed system to order the proper coax, fiber optic, wireless, hubs and repeaters for it. The physical layer is the most complicated part of the OSI model because it requires a lot of plugging in and out of cables in a system. You will usually see Computer Engineers in this layer making sure that the system 's architecture is set in a way that anyone in a business can easily manipulate it.

Possible Threats:

- Malicious insiders
- Malfunction or sabotage
- Degradation
- Overload
- Natural disaster
- **** Even a cable could be compromised bringing a system down

Security Recommendations: Depends what threat is but, in this level, you be putting your threat assessment and business impact analysis hats on. This level is the last line of defense since, the attackers usually start attacking at the application layer being the easiest and most vulnerable.

- Check access to infrastructure
- Physical location to external or natural threats
- Shift over to risk tolerances
- Recovery time
- Find out Business Impact (BI)
- Create a Contingency Plan (CP)

- Create a Disaster Recovery Plan (DRP)
- Create a Response Plan (RP)

Level 2: Data Link Layer

This layer is concerned with physical, as opposed to logical addressing, network topology, network access, error notification, ordered delivery of frames, and flow control.

Possible Threats:

- Involve interruption of the electrical signals that travel between network nodes including the physical cutting of cables
- Natural disasters that bring flood waters which can cause short-circuits
- Human vandalism
- Packet sniffing
- Spoofing Address Resolution Protocol (ARP)
- o broadcast storms (Media Access Control (MAC) flooding or cloning)
- Port Stealing
- o Dynamic Host Configuration Protocol (DHCP) Attacks

Security Recommendations:

- Properly configure Network Interface Cards (NICs)
- Configure your switches to limit the ports that can respond to DHCP requests
- o Implement static ARP
- o Install Intrusion Detection Systems (IDS)

Level 3: Network Layer

Layer that is responsible for packet forwarding and using logical IP addressing to figure packet destination sent from the Data Link.

Possible Threats:

- Sniffing Packets
- Spoofing IP addresses
- Distributed Denial of Service (DDoS) attacks in which multiple hosts are enlisted to bombard a target router with requests to the point where it gets overloaded and cannot accept genuine requests.
- ***In this layer the threats are obviously router-related

Security Recommendations:

- Observe best practices for router configuration
- o Properly configure your firewalls (static, stateless, hybrid)
- Properly configure switches
- Up to date security patches for routers
- Packet filtering is kept enabled
- Any unused ports are blocked

Level 7: Application Layer

Contain the UI and the closest of all layers for the user-end. The widest range of cyber-attacks and security breaches is possible in this layer.

Possible Threats:

- o Steal Data
- o Shut down the network
- Crash the application
- Manipulate the information sent from source to destination
- Phishing
- o Viruses
- o Worms
- Trojan Horses
- Key Loggers
- Backdoors
- Program Logical Flaws
- o Bugs

Security Recommendations:

- Application Monitoring which is the practice of monitoring software applications using a dedicated set of algorithms, technologies, and approaches to detect zero day and application layer (Layer 7 attacks)
 - *** Once identified these attacks can be stopped and traced back to a specific source.

Back-Up Method

I believe the best back-up method would be "continuous backup" because our SIM is large, and it requires real-time streaming which will record all system activity and recover system failure. System restoration would be rapid and effective since data is being captured again in real time. This method is fault tolerant meaning if a any disk in our SIM were to fail it would not immediately disable it. Lastly, the RAID (Redundant Array of Independent Disks) design offers



better performance, greater capacity, and improve reliability compared to one large drive.

- o Unused services, and interfaces are disabled
- Keep logging enabled to audit any anomalies
- Conduct regular auditing of any unusual activity that may occur
- o Up to date security patches for any switches
- o All switch traffic is encrypted

Level 4: Transport Laver

A cryptographic protocol that provides end-to-end communications security over networks and is widely used for internet communications and online transactions.

Possible Threats:

- o Eavesdropping
- o Tampering
- Message forgery

Security Recommendations:

- o Use appropriate firewall for your SIM
- Restrictive admission of transmission protocols
- o Set appropriate port numbers

Level 5: Session Layer

handles local and remote application's interaction

Possible Threats

- DDoS-attackers can exploit a flaw in a Telnet server running on the switch, rendering Telnet services unavailable.
- o Brute force attacks

Security Recommendations:

- o Check with your hardware provider to determine if there's a version update or patch
- o Stick with two-step authentication avoiding weak authentication
- Encrypted key exchange, along with the restriction of unsuccessful session attempts using timing methods

Level 6: Presentation Laver

used to standardize data with the help of various conversion schemes

Possible Threats:

- Malformed SSL Requests (use SSL to tunnel HTTP attacks to target the server)
- o Malicious Input

Security Recommendations:

- Offloading the SSL from the origin infrastructure
- Inspecting the application traffic for signs of attacks traffic or violations of policy at an applications delivery platform (ADP)
- o Separate sanitized input/proper input validation

REQUEST 2:

AS YOU WELL KNOW, MAINTENANCE ON ANY SYSTEM IS ESSENTIAL TO FIX MISTAKES, ADD ENHANCEMENTS, OR MAINTAIN SECURITY. I WAS WONDERING WHAT YOU WERE THINKING FOR SIM'S ONGOING MAINTENANCE PLAN. WE ARE HOPING THAT THIS SYSTEM WILL LAST FOR THE NEXT 5 YEARS. WE WILL HAVE TO ASSUME RESPONSIBILITY FOR MAINTENANCE IF WE BUILD THIS SYSTEM IN-HOUSE. DO YOU THINK WE SHOULD HIRE ENOUGH IT STAFF TO MAINTAIN THIS SYSTEM IN-HOUSE OR SHOULD WE OUTSOURCE IT? TO HELP THE COMPANY THINK THIS DECISION THROUGH, PLEASE MAKE TWO LISTS FOR PROS AND CONS OF IN-HOUSE MAINTENANCE VS. OUTSOURCED MAINTENANCE. COULD YOU GET THIS TO ME TODAY?

DELIVERABLE 2:

HELLO CARLIE,

I HAVE DISCUSSED AND ATTACHED A FILE HERE REGARDING THE MAINTENACE TEAM QUESTIONS ALONG WITH A LIST OF THE PROS AND CONS OF IN-HOUSE MAINTENACE AND

OUTSOURCED MAINTENACE. I HOPE THIS IS TO YOUR LIKING, LET ME KNOW IF THERE IS ANY QUESTIONS.

THANKS,

SARAH

Module 12: Maintenance

For the maintenance plan for SIM, the most ideal plan would seem to be to focus on preventative maintenance. Keeping the system up and running while avoiding the need for downtime due to system failure will help keep customers happy and reduce long term costs from expensive or long corrective maintenance, which can potentially prove a big risk as it keeps customers from being able to get the service they need.

In this process, I believe that hiring more IT staff would be beneficial for the long-term plan of the system. Along with helping to provide extra manpower in the ongoing maintenance, the in-house staff would help in being able to quickly tackle critical issues that could arise. The costs of maintaining an internal team would be a bit higher, but the benefits could be massive in keeping SIM up to date and without too much downtime.

Pros of an in-house IT team:

- Quick and efficient service
- Stronger trust
- Can be more selective
- Greater task flexibility
- No extra fees or sudden schedule shifts
- Simpler communication

Cons of an in-house IT team:

- Costs of a full-time salary
- Less scalability
- Need for dedicated IT office space
- Cost of equipment upkeep

Pros of an outsourced IT team:

- Greater scalability
- Potentially less expensive labor
- No need to pay for IT equipment
- Less dedicated office space required

Cons of an outsourced IT team:

- Potential language barrier
- Potential longer response times
- Less direct control
- Potential hidden fees or expenses

REQUEST 3:

NOW THAT WE HAVE ISOLATED THE NECESSARY FEATURES FOR AN IN-HOUSE BUILT SYSTEM, WE NEED FIGURE OUT IF IT WILL BE ECONOMICALLY FEASIBLE TO BUILD THIS SOFTWARE. MAE ROTH HAS ASKED FOR THE BOTTOM-LINE NUMBERS FOR THIS PROJECT. NOT ONLY DO WE NEED TO TELL HER HOW MUCH THE SYSTEM WILL COST TO BUILD, BUT SHE WANTS TO KNOW WHAT THE TOTAL COST OF OWNERSHIP WOULD BE IF WE USE THIS SYSTEM FOR THE NEXT 5 YEARS. YOU WILL NEED GIVE HER THE NUMBERS IN NET PRESENT VALUE. SINCE OUR IT TEAM IS UNIONIZED, THEIR CONTRACT STATES THAT THEY WILL GET A \$3/HOUR RAISE EACH YEAR FOR THE NEXT 5 YEARS.

ASSUME THAT WE WILL NEED 2 SERVERS INITIALLY FOR THIS PROJECT. ALSO ASSUME THAT WE WILL HAVE TO REPLACE THESE SERVERS EVERY TWO YEARS. IN THE SPREADSHEET THAT YOU CREATE, SHOW THE INITIAL BUILD COST AND THE COST FOR YEARS 2-5 OF MAINTENANCE. FINALLY, GIVE THE NPV FOR THE ENTIRE PROJECT. AFTER THE COST FEASIBILITY IS COMPLETE, MAE WILL FINALLY DECIDE BETWEEN THE PRE-PACKAGED SOFTWARE AND AN IN-HOUSE BUILD. THANKS FOR ALL YOUR INCREDIBLE WORK ON THIS PROJECT!

DELIVERABLE 3:

HELLO CARLIE.

MY TEAM AND I HAVE CREATED A COST FEASIBILITY CHART THAT MAE ROTH HAS ASKED FOR. I HOPE THIS HELPS HER DECISION. IT WAS A BLAST WORKING ON THIS PROJECT! I HOPE YOU HAVE A BLESSED WEEKEND.

THANKS,

SARAH

Initial Cost		Development Costs		
Server Cost	\$5,000	Database Design	\$300	5 days
Development Cost	\$6,210	Database Build		10 days
Total Cost:	\$11,210	Design of a Report	\$150	2 days
100000000000000000000000000000000000000		Design of Data Entry Page	\$150	2 days
		Design of Static Text Page	\$75	1 day
		Build of a Report	\$75	1 day
		Design of Data Entry Page	\$75	1 day
		Design of Static Text Page	\$75	1 day
		Connection to Separate System/Database	\$560	8 days
		Analysis	\$3,000	20 days
		Training	\$250	5 days
		Cybersecurity	\$900	10 days
		Total Cost:	\$6,210	
2 Year Maintenance		Monthly Maintenance Costs		
Maintenance	\$9,840	Development	\$150	2 days
Server Replacement	\$5,000	System Admin	\$210	3 days
Total Cost:	\$14,840	Training	\$50	1 day
		Total Cost:	\$410	

AFTER ACTION REPORT AND PRESENTATION

Dear Dr. Washington,

First and foremost, thank you for granting us the one-time opportunity to gain a sense on the functionality of project management and the phases that come to into play. I'm not going to lie at he is beginning of this project we had to go through a storming process because lack of experience with project managing and working without no deadlines. Since, we are always so use to having one leader and trying to meet a deadline it took a while to adjust to these changes in the climate. However, we established stability and I feel that each one of us contributed great deliverables and it went above and beyond the expectations. No one in this group contributed less and we strived to meet all deadlines for meetings and submission of modules, regardless of other responsibilities we had in our life's such as work, other projects, and tests. I firmly believe that this positive attitude and mindset that each one of our team members and members as leaders displayed is the reason why we were able to successfully complete this project and have some fun with it. I'm sure they took this appliance warehouse as if it were a role-playing game and, in the game, we were a playing a specific character with the goal to accomplish our tasks to reach the next level.

With this in mind, I believe that each one of our deliverables had great quality and quantity and we are confident enough to state that we learned what teamwork and project management is really about; furthermore, share these experiences if we were able to work on some project for a future job.

Below are the 5 skills we strengthen or developed with this project:

Skills Obtained:

- 1. Leadership
- 2. Time Management
- 3. Patience
- 4. Perseverance
- 5. Communicating Effectively

AW PRESENTATION

This is the link or portal to our presentation, Mrs. Carlie:

 $\underline{https://studentuiwtx.sharepoint.com/:p:/s/SystemAnalysisGroup/EUhkp7aVldFAnThULT2CAgkBEKcGeMsMyafK8SwVlsannQ?e=yCYsL6}$

Hope you enjoy it on December 6, 2021, starting at 10:45 AM

REFERENCES

ERP COMPARISON TOOL

OFF-THE-SHELF VS IN-HOUSE DEVELOPMENT

SAAS VS OFF-THE-SHELF

MINDTAP

SMARTSHEET

https://whatis.techtarget.com/definition/Confidentiality-integrity-and-availability-CIA. https://www.bentley.edu/news/big-hackers-target-small-business

***The links above are the references for the security reports