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JK Designs

EXECUTIVE SUMMARY

Summary of Recommendations

JK Designs would like to recommend that Rapid Response Auto Service restructure their current system of spreadsheets and manual record-keeping to an up-to-date database system. The new system will allow the company to keep up to the minute records on each customer, their vehicle/vehicles, the work performed on the vehicle/vehicles, product supply and demand, and payments received from the customers. The proposed system will also allow Rapid Response Auto Service to keep accurate records of current discounts along with each discount's expiration date. The proposed system will improve not only the time that is currently spent servicing the vehicles but will also improve the daily operation of the business.

Current System Problems

- With the current system, there is no way for the company to effectively keep a record of the discounts that are offered and the expiration dates of each.
- The company is unable to keep updated records of the customers and their vehicle/vehicles to notify the customer of recommended manufacturer services at specified mileage points.
- The company's current method of ordering needed items is not effective.
- The amount of time spent servicing a vehicle is unacceptable.

Proposed System Objectives

- The proposed system will improve record-keeping on not only the customers but also the employees. Business related issues such as discounts, employee workload, and part replacement will also be addressed.

- The new system will give the company employees the ability to service the vehicles in a more efficient and timely manner.

- The new system will allow the company to stay stocked with needed items so that they can operate smoothly on a daily basis without the worry of running out of replacement parts.

Since the company does not have any particular up-to-date system in place, the opportunities for this project are limitless. JK Designs is dedicated to designing a system that will not only address each of the company's current problems but to also creating a system that is highly functional and easy to learn and operate.

Report Contents

- Project Background Information

    This section, prepared by Logan Steelsmith (Lead Analyst), describes the issues that Rapid Response Auto Service is facing with their current "system". The background information includes the initial meeting with the contact person of the company (Bruce Myers) as well as the interviews with Rebekah McCormack (financial bookkeeper at Riverside Muffler and Alignment), Donny Nevins (service writer at Riverside Muffler and Alignment), and David Byers (database engineer for Mitchell Automotive).

- Current System Overview

    This section, prepared by Mendy Davis (Technical Writer), explains the different aspects of Rapid Response Auto Service's current system.

- Current System Analysis

    The current system analysis, prepared by Justin Kenner (Project Manager), concentrates on the cause and effects of the new system as opposed to the cause and effects of the current system. Mr. Kenner discusses the current problems and opportunities with the implementation of the PIECES (Performance, Information, Economics, Control, Efficiency, and Services) analytical process.

- Detailed Recommendations

    The detailed recommendations, prepared by Arisha Majors (Software Engineer), outlines the master plan as well as the scope and schedule of the project.

- Appendix

    The appendix contains the original Memorandum from Rapid Response Auto Service. Also included is the documentation acquired during our initial meeting with the company's contact person including the questions asked by JK Designs and the responses from Bruce Myers regarding the company's current system as well as their expectations for the new system.

BACKGROUND INFORMATION

History of the project

JK Design led by Justin Kenner (Project Manager), Arisha Majors (Software Engineer), Logan Steelsmith (Lead Analyst), and Mendy Davis (Technical Writer), were requested by Rapid Response Auto Service to develop a computer system designed to handle the needs of this growing business. And to enhance information, decision making, and growth within this company to bring it to the next level in this competitive market.

History of the Organization

Rapid Response Auto Service is a small automotive business that specializes in "instant" service on all types of cars and trucks. Services include oil changes, air filter checks, light replacement, tire services, and belt replacement. The company has serviced vehicles in the area for more than 30 years and wants to continue for generations to come.

List of Interviews and Meetings

- January 28, 2014 (10:30-10:00 a.m.)

  Reviewed project request. Introduction meeting and Team Leader assignment.

- January 29, 2014 (8:30-10:00 a.m.)

  Analyze problem and discuss questions.

- January 30, 2014 (9:35-10:45)

  Discuss items needed for improvement. Continuation of analyzing and revision

  questions.

- February 5, 2014 (2:30-3:30 p.m.)

  Questions and Answers from Contact Meeting with Dr. Myers. Research of

  sample reports and brain-storming session.

- February 7, 2014 (8:30-9:30 a.m.)

  Discussion of everyone's role in Study Report process.

- February 11, 2014 (10:05-10:55 a.m.)

  Met to discuss layout of presentation and to address questions group members had

  regarding or their part of the report.

- February 12, 2014 (8:30-10:00 a.m.)

  Brought together rough drafts of each group members section of the Study

  Report. Built on feedback and revised rough draft. Set dates of Monday February

  17, 2014 to have Finalized drafts of Study Report sections.

- February 18, 2014 (10:45-11:15 a.m.)

    Met briefly to remind the team members of our meeting on Wednesday, February 19th. Discussed what each member was to bring in order to complete the Study Phase Report.

- February 19, 2014 (7:30 – 10:45)

    Completed the Study Phase Report formatting and documentation insertion.

Description of Analytical Techniques Used

- JK Design uses a framework for classifying problems called *PIECES*. Dividing the problem into 6 categories and drawing methodology from the FAST phases employed to tackle Information Systems roadblocks.

- JK Design implemented Fact-Finding Techniques collecting information about the system problems, opportunities, solution requirements, and priorities.

Additional Sources of Information

Research in other competitor auto servicing company such as Jiffy Lube or Valvoline have provided a standard that we would like to exceed. Having an understanding of the services that they provide and presentation of their Company, online and in person, is a source of good information in which we can draw from and add new ideas to give Rapid Response Auto Service the edge over competitors in this market.

CURRENT SYSTEM OVERVIEW

After reviewing the Memorandum and meeting with Mr. Bruce Myers, it is the belief of JK Designs that concentration should be placed on the customers, employees, discounts, the supplier, and payments in the following section.

Customers

The company would like to be able to notify the current customers when their vehicle/vehicles need to be serviced. The current system does not have the ability to do that at this time.

Employees

At this time, the company is unable to keep a record of the work performed by each employee. They would like to be able to know which employee serviced which vehicle and the work they performed on that particular day.
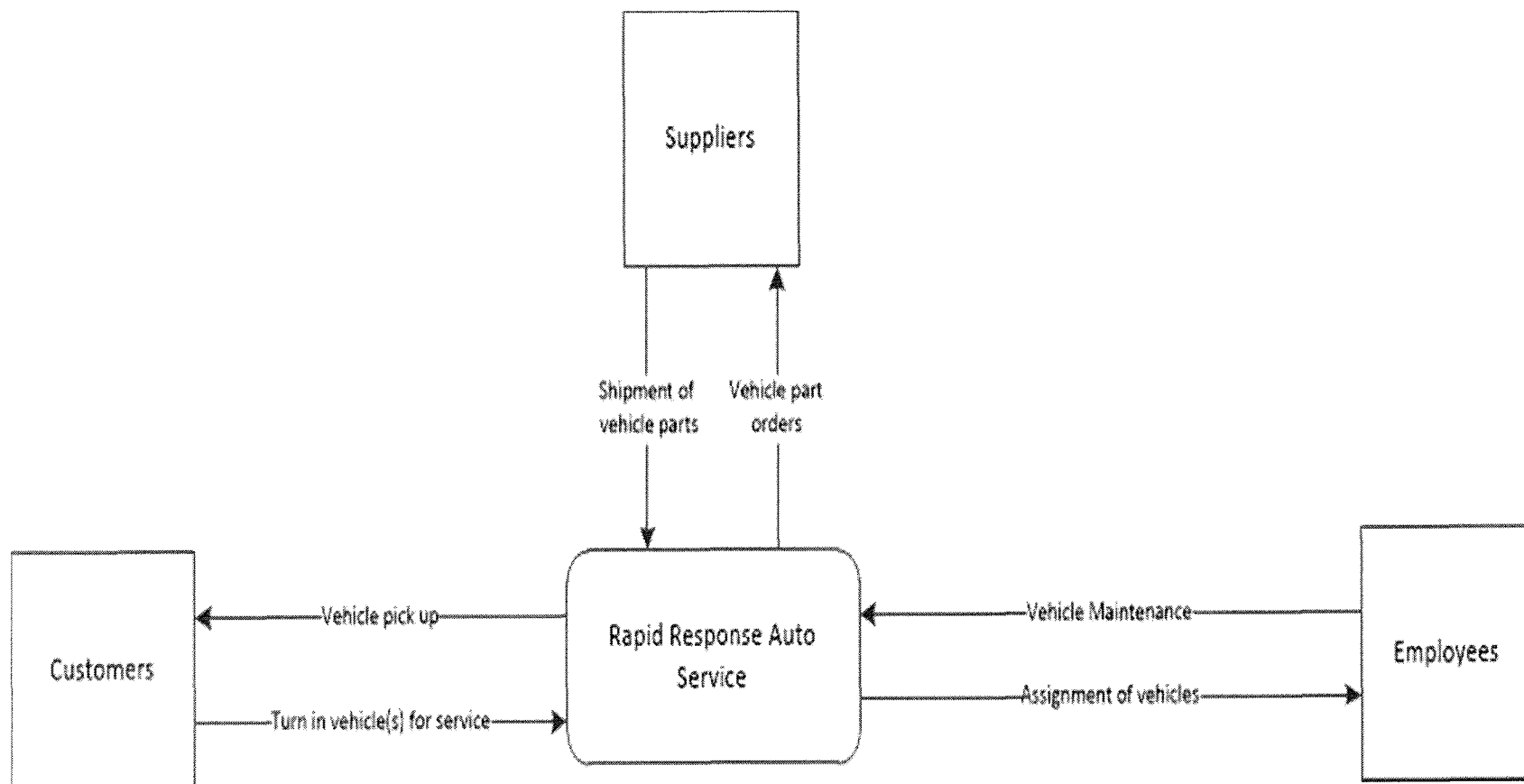
Discounts

The company distributes discounts randomly throughout the year. Currently, the company has no way to keep a record of all the discounts that are available and the validity of each one. It is the request of the owner that the new system be able to house these discounts as well as allow them to input new discounts as they become available.

Supplier

The employees currently do inventory manually. The company would like to have a computerized system that would allow them to systematically inventory replacement parts. Currently, Rapid Response Auto Service has only one supplier. The supplier is notified when each replacement part is low or out of stock. Due to the regulations of the company's supplier, a minimum amount must be ordered before a delivery will be made.

Payments

The company has no feasible way to keep a record of the payments rendered by the customers. Rapid Response Auto Service is presently issuing handwritten receipts.

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Suppliers

Shipment of
vehicle parts

Vehicle part
orders

Customers

Vehicle pick up

Turn in vehicle(s) for service

Rapid Response Auto
Service

Vehicle Maintenance

Assignment of vehicles

Employees

ANALYSIS OF THE CURRENT SYSTEM

After having analyzed the data given to us by Julio Barrios, the president of Rapid Auto Service we have come to the conclusion that their current system has much room for improvement. The main problem is that their data is unorganized. Forms are filled out on spreadsheets and then stored in filing cabinets. By doing this, errors are bound to occur. Data is prone to incorrect entries resulting in loss of data being filled out because there are no validations on a paper form. Also, data may be lost by an act of nature or a crime. With no backup of this data, all records of the business are lost.

As of now, data must be searched for by hand. Employees must go into the filing cabinets and search by hand for the customers data. Customers may become impatient and seek to take their business elsewhere because of this. Updating a customer's current data is also a problem. Data must be filed in a new spreadsheet, and the old one must be disposed of. This results in an overall waste of money spent on office supplies.

Discounts also need to be given out to make customers want to return to the business. However, there is no way to send these discounts out without taking up valuable man hours. Employees must look up customers' data by hand to find their mailing address and send them the discounts.

Finally, inventory must be calculated manually. Employees must go into the stock room and manually decide if a part needs to be reordered. This results in parts being out of stock. If parts are out of stock, and customers need these parts, then the company will lose business. Also parts may be ordered that are not needed, again resulting in the company losing money.

Performance

- Time is wasted by employees searching for customers.

- Data is unorganized.

- No way to determine when stock is low.

- Writing files by hand is time consuming.

- No way to quickly retrieve data.

Cause and Effect

Cause: As of now, data is being written on spreadsheets and stored in a filing cabinet.

Employees must physically search for these data files.

Effect: Time is wasted searching for these records causing a loss of not only customers, but

potential profits made by the company.

Opportunities

Implementing a computerized system will dramatically help the performance of this company. Not only will data be able to be entered in quickly by the user, but also retrieved quickly. This will reduce look up times and reduce the number of lost customers by the company. Granted the system will take money to implement (server cost, training of staff, etc.), however, the company will begin to see profits after the first month. Not only will a computerized system make the staff's work environment easier, but also increase the number of customers for the company.

Information

- No secure forms of backup data keep on customers.

    Natural disasters result in loss of all data files keep on customers.

- Information is disorganized.

    Keeping files on spreadsheet and keeping those spreadsheets in filing cabinets

    means data on the customer can be easily lost or misplaced.

- There is no validation checking when form is filled out by hand. Data may be skipped

    over which could cause issues later on with customer data.

    User's information may be left off of the form.

Cause and Effect

Cause: Relying on the employees to fill out paper forms causes much room for error. If

employees are in a rush data may not be filled in. In case of natural disasters, the data

may be lost. There is no backup of this data on customers. Information on customers can

become lost.

Effect: As of now, the information on customers is not well organized. Any loss of this

information might cause a loss in business. Losing customers will cause a loss in profits.

Opportunities

Implementing a computerized system will dramatically help the way information is stored by the

company. Storing information on a server will allow an electronic backup of data to be kept.

Adding validations to the form will cause information to be put in every field.

Economics

- Time is wasted fill out forms and then look up these forms when a returning customer comes back to the company.

- Unable to determine when stock is low.

  Time is wasted by keeping an inventory of when products need to be reordered.

- Company is spending money on supplies needed to keep records.

  Office supplies are need for filling out spreadsheets.

Cause and Effect

Cause: Long look up times for information on customer. Right now inventory of stock must be taken in order to see when new items are needed. By manually filling out forms on the user, office supplies need to be purchased.

Effect: Possible impatient customers might go to another company. Taking inventory causes employee's to work overtime and waste money from the company. Money is wasted on office supplies that could be spent elsewhere in the company.

Opportunities

Implementing a computerized system will help save the company money. The system will allow quick look up of customer's information, and potentially cause better customer reviews of the company. Being able to determine when stock is low by adding flags to the system will cause alters to be displayed to the employees to let them know when the stock is low. The system will allow information to be kept on a server. This reduces the cost needed for office supplies with the current system.

Control

- The company is unable to control who sees the data on their customers.

    Storing data on spreadsheets may lead to data being stolen.

- Writing records by hand may be difficult to read, thus resulting in errors.

- Not knowing when supplies need to be reordered causes inventory to become scarce or causes an overflow in stock at some points.

- Reports are hard to produce, because each file must manually be looked at.

Cause and Effect

Cause: Records are only being stored on spreadsheets which are kept in filing cabinets. This means that data can be stolen by breaking and entering. These spreadsheets also might be difficult to read at times. Reports about the company are hard to produce. Sales must be kept in another record.

Effect: Storing data on spreadsheets causes many problems. There is the ever present activity of theft can cause loss of data. Since spreadsheets are written by hand the data may become obscure making it difficult to read customers records. Monthly and yearly sales reports are hard to produce. Each aspect of the sales must be taken in by hand instead of having a centralized system that does it for the company.

Opportunities

Implementing a computerized system will reduce the amount of time it takes to retrieve data. This will make sales reports easy to obtain. Data can also be backed up and secured behind a firewall for protection. Typing data causes virtually no difficulty in reading data.

Efficiency

- Employees manually search for supplies in stock room instead of having an organized location.

- Spreadsheets can become difficult to maintain and employees may have records of customers who have only decided to come to the company one time.

- Inventory must be checked manually to determine if stock needs to be ordered on certain parts.

- Determining which supplier has the best rates can be time consuming.

Cause and Effect

Cause: Spreadsheets are difficult to manage. They begin to pile up around the office at increasing rates. Ordering these spreadsheets can become a cumbersome task. There must be spreadsheets to keep data on customers, inventory, and suppliers.

Effect: Keeping data in spreadsheets is not an efficient way of keeping data. Data must be manually looked up which takes up valuable man hours. Stock can become low, and the company may run out of a part before they realize it.

Opportunities

Implementing a computerized system will cause data to be stored more efficiently. The system will allow the employee to see when inventory is low on stock. Alternatively, the employee can also see when inventory is high on stock, and the company can place discounts on specific items. The system will also allow sales reports to be kept so the manager can see how well his company does during specific periods of time.

Service

- Customers become frustrated with long look up times.

- The best price for the supplies the company sales is undetermined.

  The company may easily get undercut by their competitors.

- Discounts are not available at the ready in order to send to customer's home mailing address or email address.

- It is difficult to update customer data whenever the customer needs their data changed.

Cause and Effect

Cause: Data being stored on spreadsheets is hard to change. A new spreadsheet must be started in order to update the customer's data. Discounts, while available, are difficult to send out to every customer that has had their vehicle serviced at this company. Price is determined by the manager and not through a mathematical system.

Effect: Data may become duplicated if a new spreadsheet is created to change the data of a current customer. No discounts being sent out may result in potential customers never returning. Customers might take their business elsewhere if they do not feel as though this company has the best prices on their stock.

Opportunities

Implementing a computerized system will cause services to be executed more efficiently. Customers will be pleased with the quick look up times of their data. Discounts will be forwarded automatically to everyone in the system and potentially increase profits. Changing data will become easy by being able to update the data on a current user with a few clicks.

SUMMARY OF IMPLEMENTATION OF NEW SYSTEM

By implementing in a database for the company, and using asp.net to retrieve this data through a computer, production levels of Rapid Auto Service will increase dramatically. Granted the startup price of implementing this system will be somewhat expensive, however, the company will begin to see profits in as little as a month. Overall, this is the best solution for this company in order to keep up with other modern day companies.

Data will be able to be retrieved quickly by employees. New customers will be able to be entered into the system easily. Current data on customers will be able to be manipulated quickly. Cost of office supplies will be reduced, and office space will be gained.

Customers mailing address will be able to be stored in the database. Discounts will be available through the system. With home mailing address stored, these discounts will be sent out to current and past customers resulting in returning customers and an increase in profits. Discounts can also be forwarded to customers email address, again resulting in an increase in profits.

Every time an item is sold, it will be negated from the stock. The system will alert employees when the stock on a certain item is running low, and need to be ordered. This will cause stock to only be ordered when it is needed, again resulting in a profit for the company. This will also take care of a surplus in stock. Supplies will only be ordered when they are needed by the company.

DETAILED RECOMMENDATIONS

System Improvements objectives and priorities

Objectives and priorities (most important to least important)

- Increase security of data by 45%

- Speed up the rate of services by 30%

- Increase the speed of retrieve data by 45%

- Diminish the change of data loss by 40%

- Create a database to increase the level of organization by 50%

- Increase the level of inventory management by 35%

Constraints

- Must be completed by May 9

- Must work with Google Chrome, and Firefox

- Must use the latest version of ASP.net, and MS SQL Server

- Must handle different levels of Security

Solutions

JK Designs has come up with three possible solutions. Each solution has its own pros and cons and would help reach some of the objective previously mentions as well as take into account the constraints. The solutions that were carefully selected for debate were: maintain the current system, purchase a software/hardware, or creating a system, which would be designed and implemented by JK Designs.

Option 1: Maintain the current system

- Operational Feasibility

  The current system has many operational deficiencies when it comes to organization, keeping up with orders, inventory and the time it takes to service a customer.

- Technical Feasibility

  The current system does not function under any vast technical means.

- Economic Feasibility

  If the current system is maintained there would be no increase economically and may put them at risk of losing economically

- Schedule Feasibility

  There would be no effect to the schedule if the current system is maintained.

Option 2: Purchase software/hardware

- Operational Feasibility

  Purchasing a system would be beneficial to Rapid Response Auto Service in regards to resolving some problems addressed. Even so purchasing a system may not guarantee that all problems that need to be resolved will be.

- Technical Feasibility

  Purchasing a system would allow Rapid Response Auto Service to become computerized to help the company function effectively.

- Economic Feasibility

    This is a relatively non-costly choice for Rapid Response Auto Service. It would

    benefit the company economically.

- Schedule Feasibility

    A lot of time would have to be taken to review the vast option of systems

    available for purchase. Rapid Response Auto Service may have to sacrifice what

    they want in order to come up with the decision. Time would have to be taken to

    train employee and management staff.

Option 3: Custom designed information system

- Operational Feasibility

    A custom designed information system will take into effect all the problems

    addressed by Rapid Response Auto Service and will leave room to resolve matters

    that were not address. There will be an increase in business operations that will

    great benefit Rapid Response Auto Service. There would be no question as to

    what the company will be getting due to the system being designed to their

    specifications.

- Technical Feasibility

    Rapid Response Auto Service will have a full functioning technical system due to

    the well trained team of JK Design. The system will be available for support and

    maintenance by JK Designs. The training involved when it comes to a

    computerized system will still be required but the training can be done through JK

    Design.

- Economic Feasibility

   The economic costs of creating a fully customized system will be great but will
   also benefit Rapid Response Auto Service greatly. The costs will come from the
   hardware and software that will be needed for the newly developed system,
   maintenance for the current system and the training of the employees and the
   management staff.

- Schedule Feasibility

   The custom system will be completely by May 9th with the starting date of the
   development phase. The system will be made completely function; the training of
   the staff will take place. After the completion date, the system will continually be
   analyzed for future problems and will be updated accordingly until the system
   becomes obsolete and a new or restructure system is recommended.

Project Plan

After analyzing the current system implemented by Rapid Response Auto Service, JK Designs will create a new computerized system to better improve computer support for business operation. This system will allow Rapid Response Auto Service to function more efficiently as a business.

Scope Reassessment and refinement

JK Designs have review the scope of the project and have created a general baseline of what the system will be handling.

The system will handle the following data for Rapid Response Auto Service:

- Customers

- Orders

- Products

- Types of service

- vehicle information

- Employee assignments

The system will handle the following business processes:

- Inventory

- suppliers

- orders

- Emails

- Manufacture based vehicle recommendations

The system will include an interface that will take care of the following:

- Customers

- Vehicles

- Inventory

- Orders

- Sales

Rapid Response Auto Service will have to make purchases in order to implement the full system. The items or services needed to be purchased are (but not limited to) the following:

- Database

- Server

- Internet service provider

- training

- Computers

- Applicable software

Revised Master Plan

The master plan consists of developing a fully functioning system that will provide solutions to the multiple problems presented to us by Rapid Response Auto Service. After conducting various interviews and doing research on similar companies, JK Designs have created a structured plan on how to create a system to better Rapid Response Auto Service . JK Designs have listed objectives to better improve, performance, information, economics, control/security, efficiency and service.

After modeling and analyzing Rapid Response Auto Service's current system it was concluded that maintaining the current system would not be beneficial for Rapid Response Auto Service and buying a hardware/service package through a third party company would create more difficulties due to the current system not being computerized.

Summary of Master plan

- JK Designs will implement a fully functional system that will include
  - A database
  - A web interface
- The database will be stored using MS SQL Server and the web interface will be created using Asp.net.
- The system will allow an increase in productivity, as well as profit, after initial cost of system to implement.

Detailed plan for the definition phase

The following dates are milestones for the Design Phase of the implementation process. JK Designs will create a formal report that will address how the system will be implemented. The report will contain models to visual show Rapid Response Auto Service how the system will be broken up. There will be a total of five progress reports where JK Designs will meet with the company contact of Rapid Response Auto Service to keep the company up to date with how the system is developing. A final presentation will be given after the system is fully completed.

Date	Event
March 25	Design Phase Due
March 27	Design Phase Report
April 1	Design Phase Report
April 3	Progress Report 1
April 8	Progress Report 2
April 15	Progress Report 3
April 22	Progress Report 4
April 24	Progress Report 5
May 6	Deadline for Project Reviews
May 5	Final Project Reports (8:00 AM-10:00 AM)
May 9	Final Deadline

APPENDIX

Memorandum

To: Bruce Myers

From: Julio Barrios, President
         Rapid Response Auto Service

Date: 1/27/2014

Re: Computer Support for Business Operation

Our company provides "instant" service on all types of cars and trucks. We do oil changes and other basic services while the customer waits. We also inspect various replaceable parts with the idea of selling replacements if they are defective. These include headlamps and other bulbs, belts, air filters and other items. Thus we must maintain an adequate stock of these items. We provide several qualities of oil which are sold at different prices. There are standard fees for basic services and other costs for individual items. We advertise heavily, providing discount coupons in many formats, so our system has to allow for these discounts but we must also be aware of the expiration dates of the various discounts. We really need a computerized list of all the coupons that are issued, with the ability to remove the ones that expire when they are no longer valid. We also need to keep records of the vehicles that we service so that we may reference standard lists that contain recommendations from vehicle manufacturers at various mileage levels.

We do not have a good method of deciding when to order parts and sometimes find a needed part unavailable and lose a sale. We need the computer to help us keep the needed parts in stock based on the history of past sales. It needs to create orders for us as well as provide reports that show the activity in our inventory that will assist us in business decisions.

We now try to do mailings that remind customers when their car needs servicing but we have no organized way of doing that. We need computerized help on that as well.

We also have trouble with the amount of time that it takes to service a vehicle. It takes a good while for us to greet the customer and locate their vehicle in our records so that we can make recommendations on what services they need. We need to be able to speed up this process.

I feel certain that your company can help us with all of our computer related issues. We would like for you to schedule a meeting with me to review our business and propose a new computerized system.

TO: Arisha Majors
             Mendy Davis
             Justin Kenner
             Logan Steelsmith ✓

FROM: Bruce Myers *BM*

DATE: January 27, 2014

SUBJECT: Appointment to Project Team

You have each been appointed to a team to conduct an initial system study of the project whose description you will receive. You should elect a chairperson for the group. This person will serve for the duration of the project. You should schedule a meeting with me to occur no later than the end of the day on Tuesday, February 11 so that we may discuss the project with its owner. Prior to this meeting you should hold one or more organizational meetings. The group should draft a list of questions about the project to bring to the meeting. This list should be duplicated with one copy for each team member and one for me. Email my copy to me in advance. Notify me of the name of the chairperson on or before the day of the meeting. The project is either described on the attached memorandum or will be provided to you later.

Group meetings are an essential part of the course. Every effort should be made to schedule them at mutually convenient times. Meetings with me should be set at free times on my schedule. Do not finalize plans for a meeting without confirming the time with me. Group meetings are also subject to the regulations distributed at the beginning of the semester.

QUESTIONS AND ANSWERS FROM CONTACT MEETING

February 5, 2014

Question 1: What is the company doing now? How are they storing the data? Is something such as a database in place already or are we building the system from the ground up?

Answer: Assume they're using a mixture of spreadsheets, whatever way we can store the data, not anything organized, not a database at all. The group is pretty much building from the ground up. A lot of businesses do it with whatever somebody set up for them.

Question 2: Do they have remote sites?

Answer: There is only one site.

Question 3: How much information do we have on the current customer?

Answer: As far as the information on the current customers, you won't necessarily be keeping detailed information. You would hope you would have the customer's name, address, phone number, and e-mail address. So we could e-mail them when they're supposed to get their car serviced or we could send them regular mail. So we'd hope to have basic information. It's hard to keep up with e-mail addresses.

Question 4: When they say mailings do they mean e-mail or letters or both? If e-mail, does the company already have the e-mail addresses?

Answer: Mailings could be either. The customer could get both e-mails and regular mail. Keeping the current e-mails is hard to do. We want to continue to ask people to update their e-mails every time there's a change.

Question 5: Should we have a list of the discounts and expiration dates of discounts? Which format for discounts does the computer use?

Answer: Discounts in the form of like $8 off next oil change, usually expiring a certain number of months from when the notification is sent out. For example, one month or two months. Usually a discount for an amount of money but occasionally we might run a discount for a free air filter to the customer's specified vehicle. Every discount has to expire.

Question 6: Is there a set price for all replacement work or do all the prices differ?

Answer: There would be a chart to tell us if we have to replace something and it would definitely be a different amount depending on what it is and how long it takes to do the job.

Question 7: What system are they using to keep track of customer vehicles?

Answer: We use the VIN number to keep track of the customer vehicle. You won't be able to interface with it but we like to use a barcode scanner that scans the VIN number and allows you to enter that number.

Question 8: How are they keeping track of the parts they have now so they know when to reorder or do they do inventory manually?

Answer: The parts that they have now is an inventory system. They're pretty much looking at the shelf and doing counts. But they would expect you to fix the computer so that it would keep

up with a number of items on hand and over time you would hope to create a history so the reordering of the inventory is determined by the minimum or the low limit. The faster a product moves the higher you set the low limit. The low limit would need to be the field so that when the quantity reaches the low limit it goes on the list to be reordered. We can't reorder one item because they come from the same supplier (or company) and you have to be able to order other items from that company as well. The company as a rule won't ship you one item. If you're going to place an order they make it be $300 or $500. They have a minimum order amount. Have to do work on inventory, more than a little.

Question 9: Should we have a list of basic services or is what information that was included in the memo every service they offer? What are the fees and costs for services?

Answer: Basic services include oil changes, tire rotation, everything from bulb replacement to other general maintenance, filter replacement, brake work, A/C service. It could be an ongoing list. There would be fees and costs that went with them in order to do that.

Maintenance schedules for these vehicles that we could get access to. Maintenance schedule says at 50,000 miles, for example, replace the transmission fluid. We want to be able to tell them that and then we have a fee for doing that.

Question 10: How long does it take now? What time limit is considered to be "good" and what is considered "bad"?

Answer: We would like to think we could do a standard oil change and get people in and out in 15 minutes (15 – 20 minutes) and it may take an hour. The purpose of this business is so people

don't have to leave their vehicle and come back. That once was the model for everyone that had a car service. We're part of the generation of doing things faster.

Question 11: Do we need to know the mileage when each service is to occur?

Answer: You do need to keep up with the mileage. When you service a car the mileage needs to be recorded. That's how we know when we would generally expect them to need to have it serviced again. We would tell them when they leave or give them a sticker for their vehicle. We would use 3,000 miles as a guideline for when it needs to be done. We'd have to kind of guess when they've driven that far or do a mailing for them.

Question 12: Could we get a list of suppliers?

Answer: Will have a supplier list with information on them being basic information: name, address. Assume every item comes from only one supplier.

Question 13: Do they want us to keep track of employees? Do they want to keep track of which employee works on which vehicle?

Answer: Yes, we want to know which employee worked on which vehicle.

At the end of the day what we're actually interested in is the amount of money the customers paid that were served by a certain employee. Think about how to do that because usually if there's four or five guys working they may all help out. But they'll be one who is the primary contact. We want to know as the primary contact how much business are these people generating?

We would like to think about having a procedure that we would normally go through and be able to check it off in the computer. When they come in we open a screen for them and it's going to say tail light check, signal light check, brake light check. And we'd like to be able to note that we did that and another place to note if we warned them that there's a problem. We want to be able to say that we asked them about this and what was the result.

We have to be able to know what coupons are out and be able to put new coupons out there. Certain times of the year we could expect people to work and do a lot more to their vehicles because they're getting ready to go on vacation. We might want a few more offers around April, May, and June. We want to be able to time all of that.

Ought to be able to capture the method of payment. No checks. All popular credit cards or cash. Will have a credit card terminal.

Rapid Response Auto Service, System Development Process

Customers

(start) → Brings vehicle in to be serviced

Customer uses the discounts → The customer pays for the services performed.

Employees

Diagnoses vehicle problems and relays the information to the customer → ⟨Works on the vehicle⟩ → Orders parts from the supplier as they are needed → Pays the supplier for the parts received.

Discounts

The company issues the discounts to the customers via e-mail or regular mail

Supplier

Keeps the company stocked with necessary parts

Payments

Payment is entered into the system

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