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An investigation of the user satisfaction of customer relationship management program

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An investigation of the user satisfaction of customer relationship management program

Abstract

The thesis investigates user satisfaction for Microsoft Dynamics CRM 2011 by conduction surveys to graduate level students. The training manual was developed to guide the way to follow instructions to create an order and an invoice.

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AN INVESTIGATION OF THE

USER SATISFACTION OF

CUSTOMER RELATIONSHIP

MANAGEMENT (CRM) PROGRAM

By

Sangeun Lee

A Senior Thesis Submitted to the Eastern Michigan University Honors
College in Partial Fulfillment of the Requirements for Graduation with
Departmental Honors in Computer Information Systems

Approved at Ypsilanti, Michigan, on this date April 14th, 2014

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Project Supervisor

I would like to appreciate the project supervisor Dr. Huei Lee's supervise. He assisted me with entire thesis from developing ideas and conducting surveys to concluding my thesis. By virtue of your supervise, I was able to finish the thesis successfully.

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Introduction

In the today's world, customer relationship management is one of the primary segments when doing business. In the perspective of customers, they have a plenty of options. Unless companies strive hard to make the customers come back to their products, they might not buy the same product. Furthermore, if there is a better product available in the market, customers would buy the better product. Therefore, competition between companies is fierce. In addition, it was found out that CRM's market size increased by 12.5% over 2011 (Columbus, 2013).

In 2013, CRM Switch organized a survey of 752 employees working in the U.S. based companies. The survey provided market share of customer relationship management (CRM) programs. As a result, Microsoft Dynamics CRM is ranked the second highest and constituted 20% of CRM programs. The highest program was Salesforce by 39.8%. Other major competitors included Oracle, SAP, SalesLogix and so on. Microsoft Dynamics CRM was used widely throughout companies with one to 100 employees. The proportion of MD was lower in bigger companies. In other words, this means that MD is a great tool for small-sized companies.

Microsoft Dynamics CRM is a tool that allows companies to manage their customers efficiently. There are three criteria for CRM, which are sales, marketing and project management. In addition, it is composed of three modules, which are Sales, Marketing, and Service. The primary module in Microsoft Dynamics CRM is Sales, since it manages the entire sales process. With sales data, employees can utilize Marketing module and Sales module.

Purpose

The primary purpose of this thesis is to study user satisfaction of CRM software. The secondary purpose of the thesis is to investigates how to design a training manual for students or employees when using Microsoft Dynamics CRM. The research method I used is utilizing the measurement of user satisfaction survey in the design process to improve the training manual. The measurement tools used in the thesis are based on the Technology Acceptance Model (TAM) (Venkatesh et al., 2003).

Next paragraph, I will discuss Sales module in Microsoft Dynamics CRM.

Sales Module in Microsoft Dynamics CRM

Sales part in Microsoft Dynamics CRM (2013) allows users to manage their customers coordinately. By depending on the number of people who want to access the data in CRM, companies can issue multiple user ids and passwords in the company's server. Therefore, employees have better accessibility and visibility of the data. There are some discussion about training in Microsoft Dynamics CRM such as Kao, Chen, Lee (2012) and Venkatesh et al.(2003).

Figure 1 is a representative sales process in Microsoft Dynamics CRM. First of all, a lead has to be created. The lead is a potential customer. Every lead includes a topic which explains why the customers is the lead. Second, an opportunity is created by qualifying the lead. By depending on the topic, stating opportunity products is beneficial. Third, a quote is developed by the data entered in the opportunity. Fourth, an order is placed if the customer decides to buy the product based on the provided quote. Finally, an invoice is made.

The subsequent handout was provided as a training manual. 40 graduate level students participated in the survey after completing the handout. Participants and the survey are explained in research methods (Page 25).
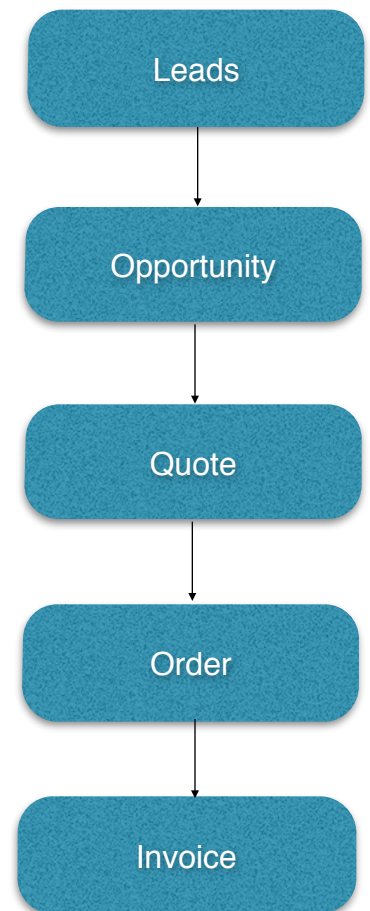


Figure 1. Sales Process in Microsoft Dynamics CRM

Training Manual

How to manage Sales module in

Microsoft Dynamics CRM

Microsoft Dynamics CRM 2011 is the software for enterprise resource planning (ERP) and customer relationship management (CRM). It is composed of four modules which are Workplace, Sales, Marketing and Service.

The objective of this handout is to follow the process of sales in CRM. CRM's Sales module is composed of 15 parts, and five steps will be used to place an order and create an invoice. The five steps are lead, opportunity, quote, order and invoice. You will start from creating your lead, then an opportunity, a quote, an order and an invoice.

Leads

Opportunity

Quote

Order

Invoice

For this handout, you are expected to run Sales module and answer short answer questions. Ultimately, you will fill out the survey based on your experience on Sales module.

1. Log on to http://50.241.208.85
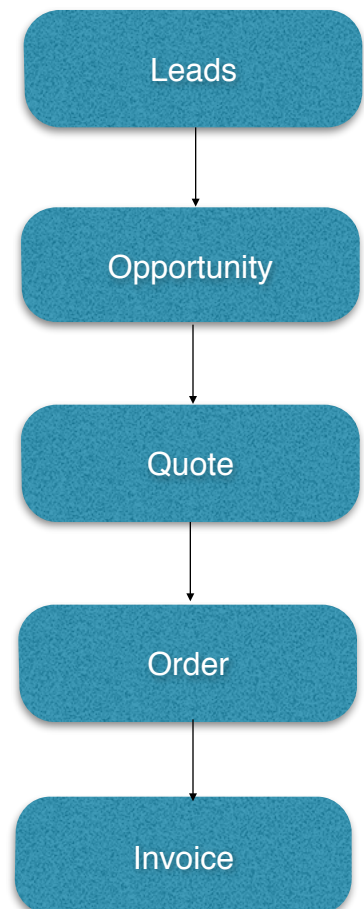
    Your UserID and Password will be provided.

*** Before you start, make sure pop ups are not blocked.**

  Follow these steps if they are blocked. (Microsoft Dynamics CRM, 2012).

  • Internet Explorer 7, Internet Explorer 8, and Internet Explorer 9

  • Click the Tools icon (it resembles a mechanical gear), and then click Internet

    Options.

  • Click the Privacy tab, and in the Pop-Up Blocker area, click Settings.

  • In the Address of website to allow box, type the URL that you use to access

    Microsoft Dynamics CRM. Your Microsoft Dynamics CRM URL will end in

    "dynamics.com".

  • Click Add, and then confirm that the URL has been added to the Allowed sites box.

  • Click Close, and then click OK. For the changes to take effect, restart your browser.

<div align="right">(Solution from Microsoft Dynamics CRM website)</div>

2. When you log in, you will see Dashboard, which looks like following. Click on Sales,

which is on the bottom left side of the screen.

Tip) You can always change view of the list by clicking as following.
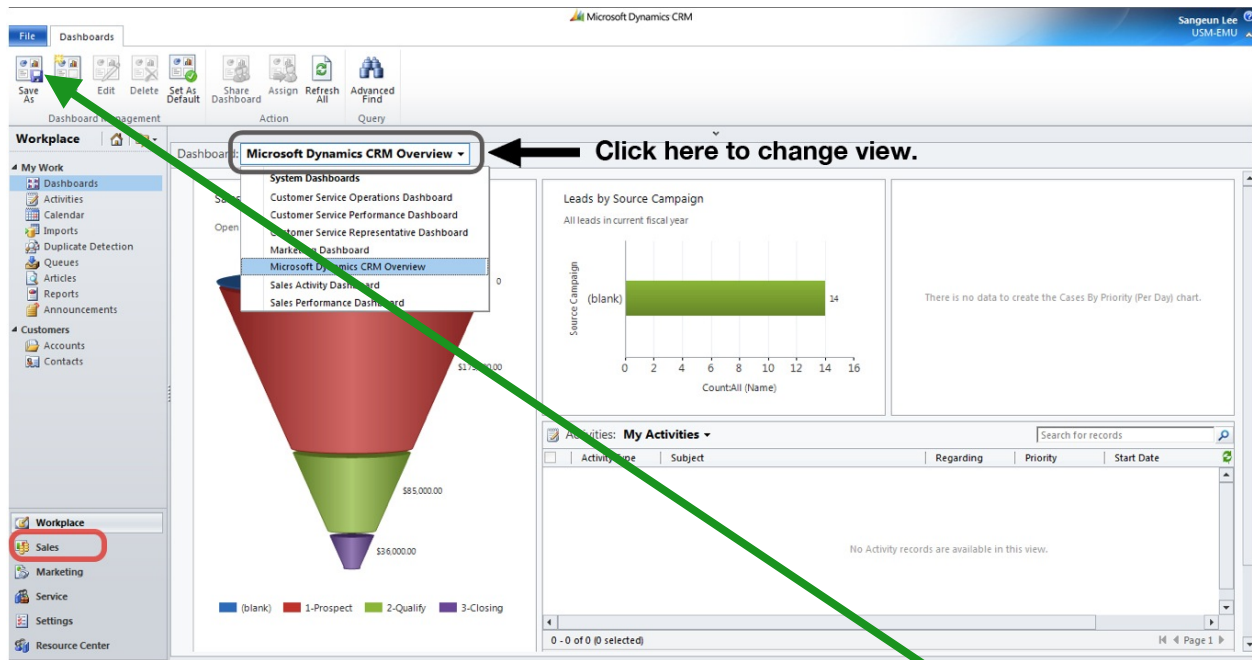
3. Then, you will see Leads in Sales module.

Leads

Leads are referred as potential customers who can be either qualified or disqualified.

These leads are not in your contacts and accounts yet. By qualifying Leads, you can add them on contacts, accounts and opportunity. Lead is important, since it can be converted to opportunity. When leads are converted, they are qualified.

Let's start from opening the list of Leads.
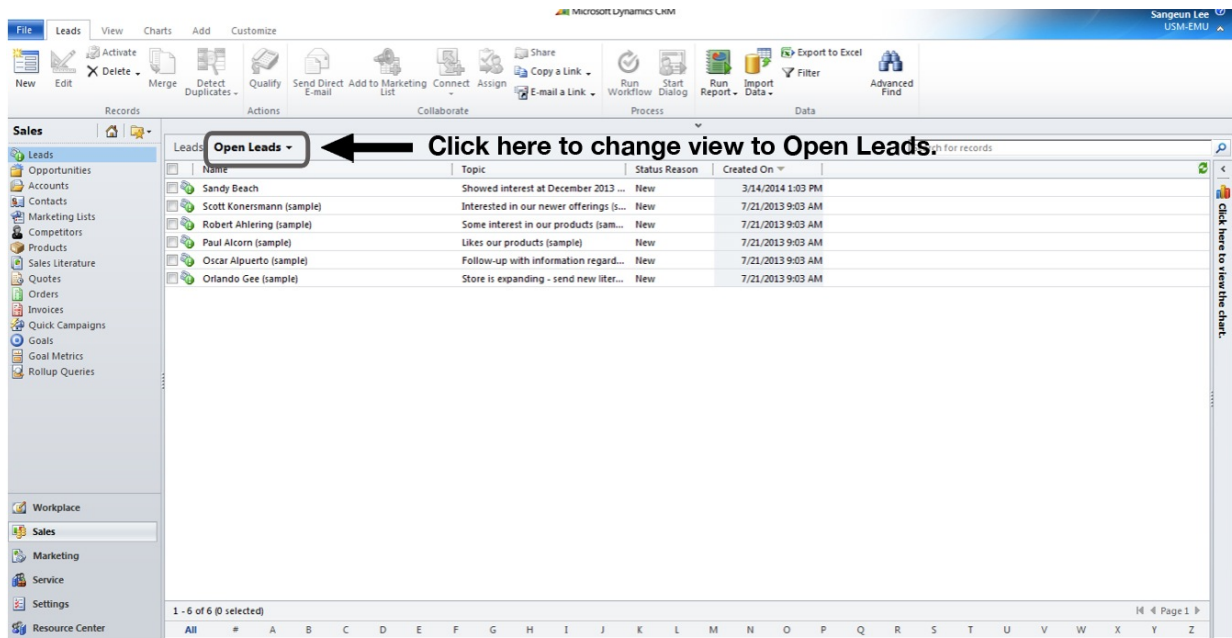
As changing the view in Dashboard, you can change the view to 'Open Leads' by doing like above. Then, click on the New button on the ribbon menu. (it is marked on above screen shot)

4. Enter information about a lead. Make sure you enter Topic, First and Last name, and Company name. The topics are customers' issues such as showing interest in products, liking our products, expanding stores and so on.
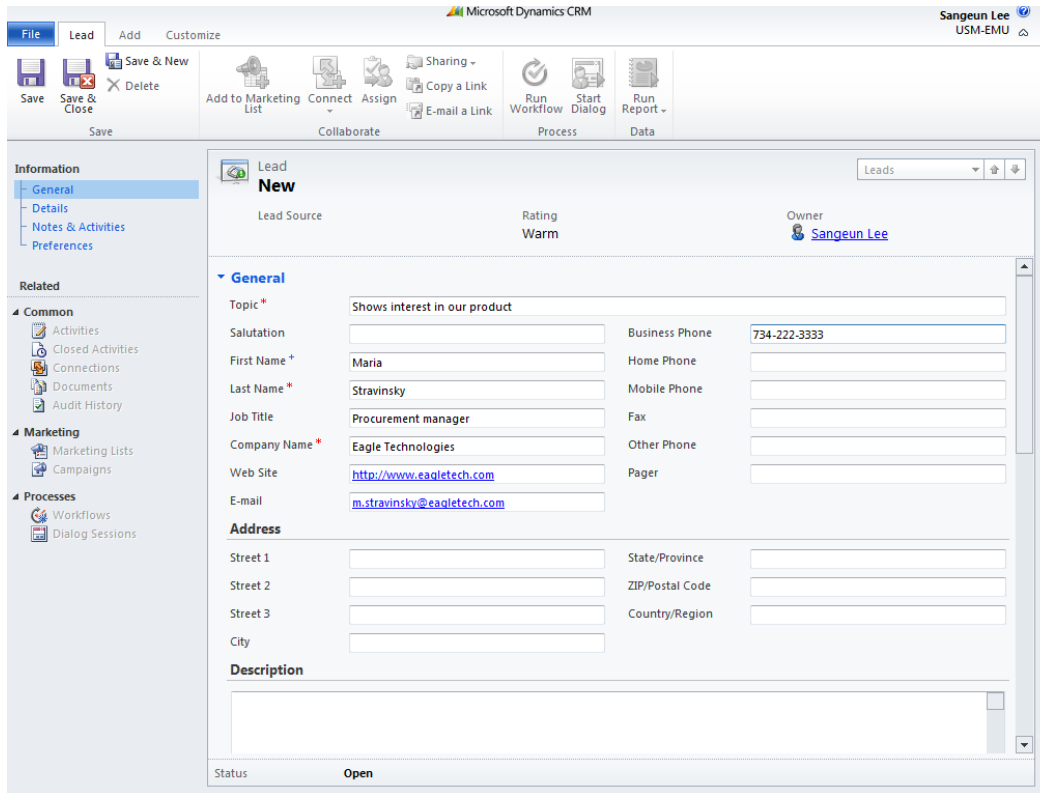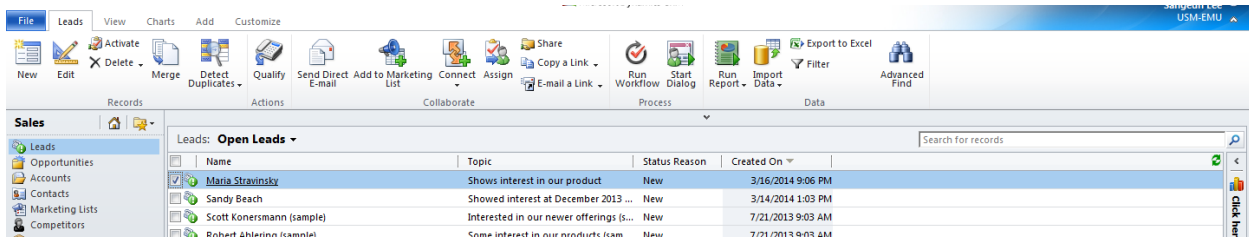
5. When you are done entering, click on Save&Close.

Then, you can see the new lead on the list.

How can we convert the new lead (Maria Stravinsky) to an opportunity? Before figuring

it out, there are other options as well. Click on the check box for the lead to see

options on ribbon menu.

What are other possible options on ribbon menu? (Write at least 3)

6. For now, click on **Qualify** on ribbon menu to convert a lead into an opportunity. (Qualify button on looks like the image on right.) Then, you will see following window.
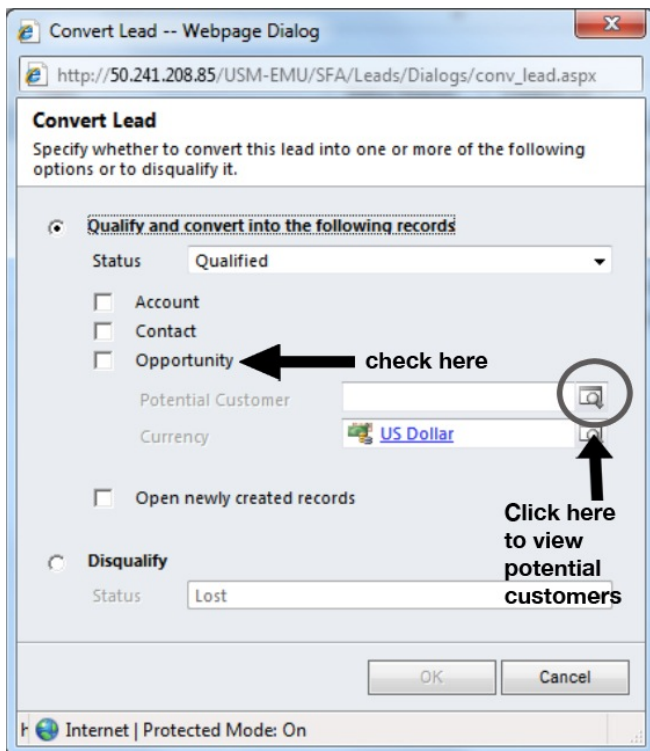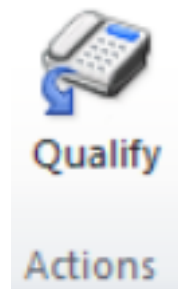
7. Like the screenshot above, check on Opportunity and choose potential customer by clicking on look up button. There are some sample customers. Check on whichever customer you want.
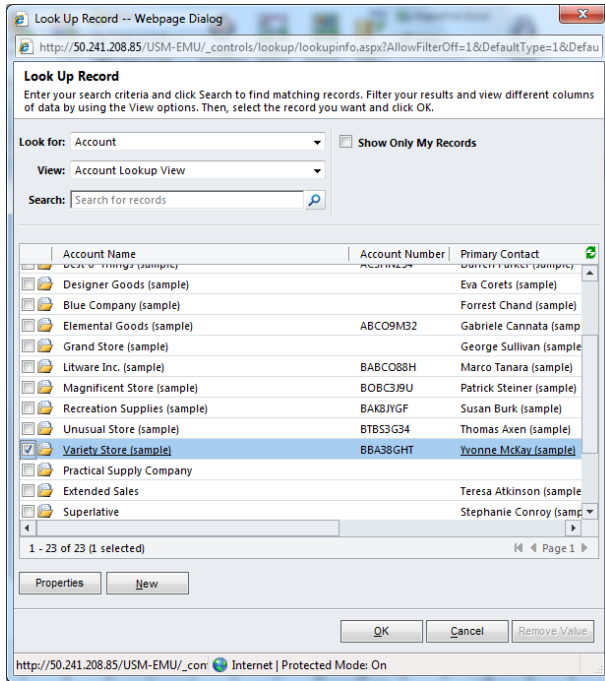
8. Click OK, then you will go back to the previous dialog, which is qualified lead. When it is converted, ribbon menu is deactivated like following. Also, you will see 'Reactivate Lead' button instead of 'Qualify' button on ribbon menu.
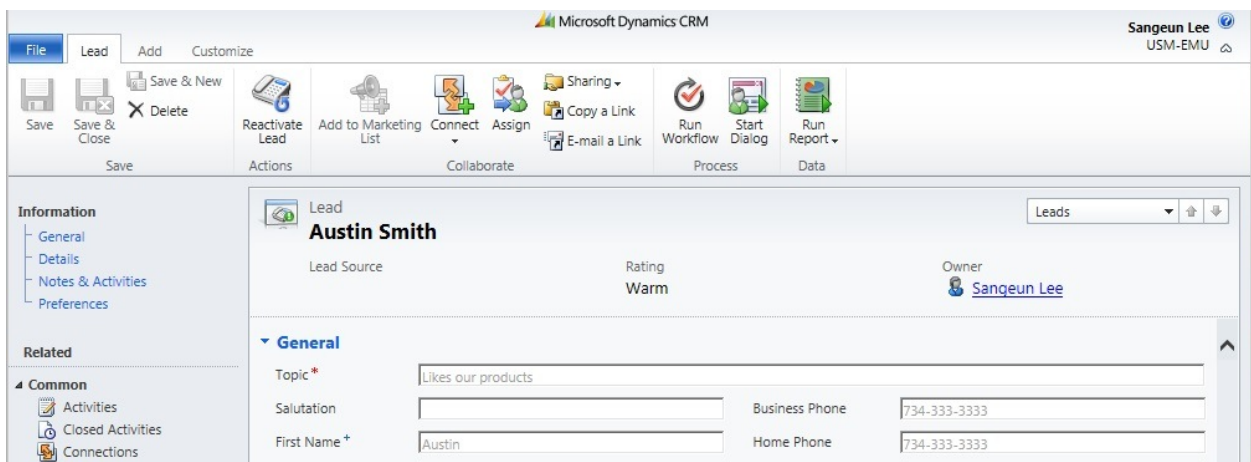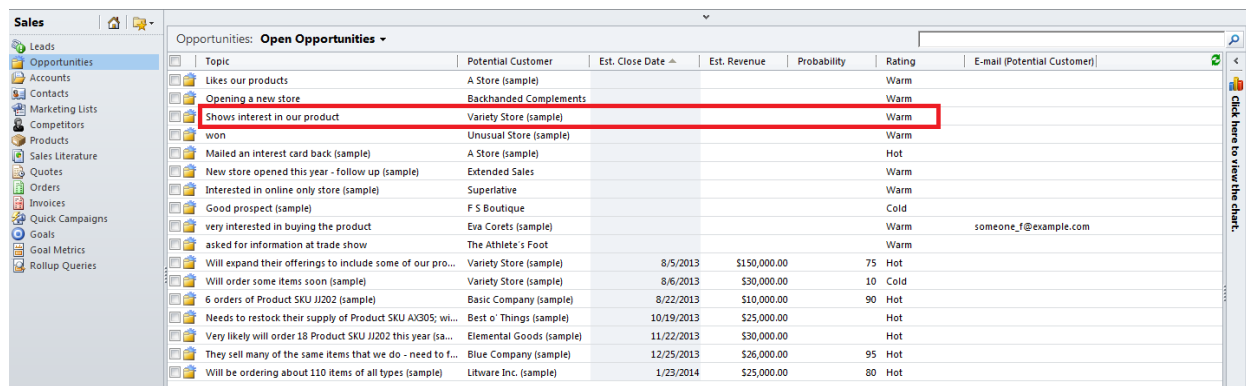
9. Click on OK to confirm that you convert the lead.

10.

Opportunity

After converting lead into an opportunity, we need to make sure that the opportunity is won so that it can converted into a quote. Go to 'Opportunity', and choose the view 'Open Opportunities'. Then, you can see a list like following.

The opportunity called 'Shows interest in our product' is the converted lead. Click on it, then you will get a screen like following.

If you have hard time finding your converted opportunity, select view as My Open Opportunities like following. Then, find your topic and open the window to <u>make sure it is the opportunity that you converted from your lead.</u>

11. Click on the topic and you will see the window like following.

12. Now, we will add Line Items. You can view it by <u>scrolling down</u> in the current opportunity page. Before adding line item, we need to select price list. You can choose price list by clicking a button like the following screen.

Then, it will open Price List dialog.
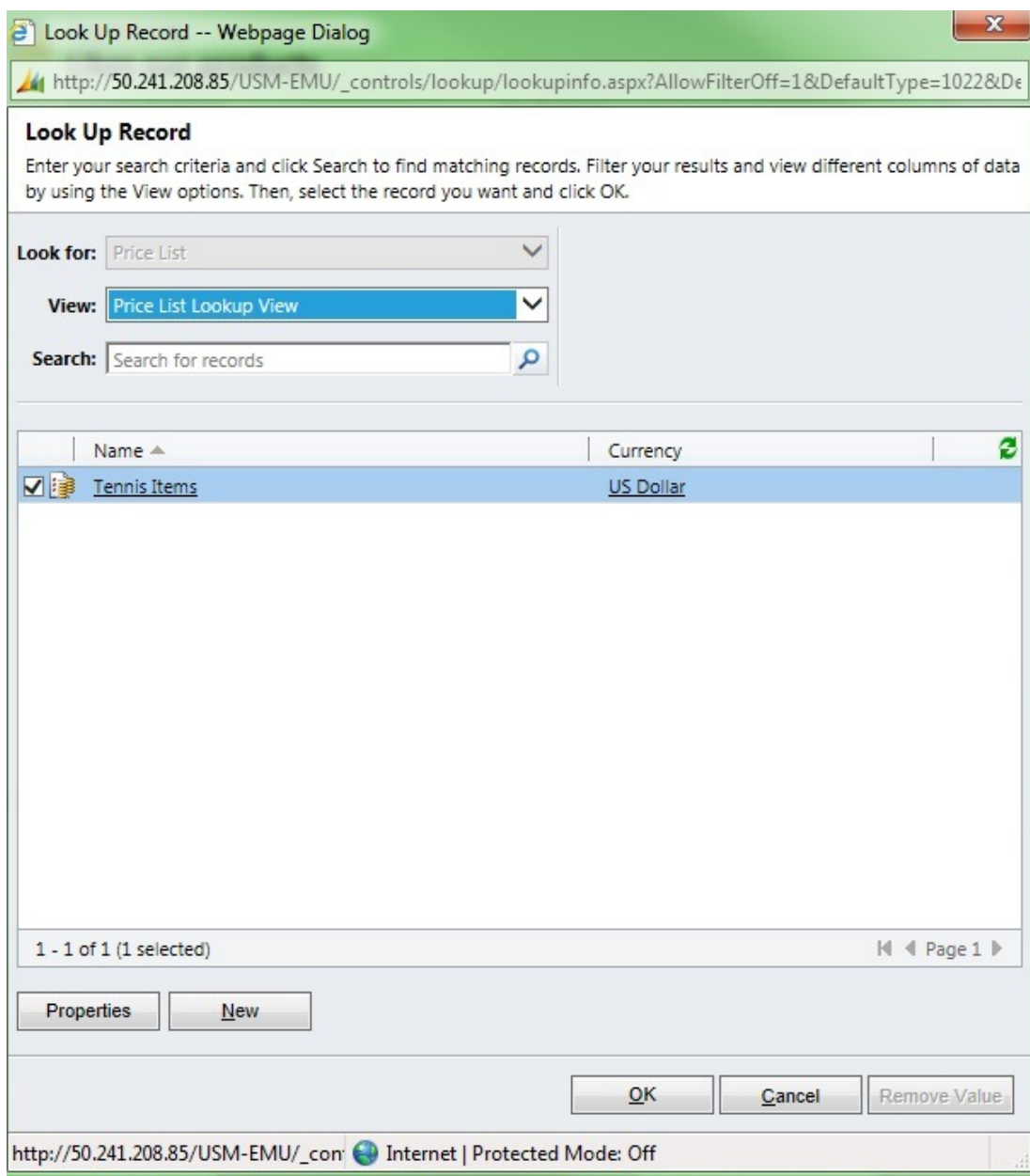
Check on Tennis Items and click OK.

Then, save this by clicking on the Save button on ribbon menu.

13. Now you will see the screen like following:

14. As shown above, click on the box to add new opportunity product.

You will get a following screen. (If it says to save before adding a product, click on

Save)

15. Choose 'Existing Product' that the customer is interested in, choose right 'Unit',

and enter 'Quantity'.

Choose as following.

Field	Value
Existing Product	All-Pro Tennis Racket
Unit	1 Racket
Quantity	Any number you want. For example, 100

16. Save and Close.

Now you will be back on Opportunity screen.

17. Click on Opportunity tab, and Recalculate Opportunity since we entered the product and quantity. Then, it will recalculate Estimated Revenue (Est. Revenue on the screen) and will be shown on the screen (make sure you choose 'System Calculated', not 'User Provided). When you are done, save.

18.

Quote

When the opportunity is recalculated, click on '**Quotes**' under <u>Information</u> on the left

side bar. Then, you will get the following screen.
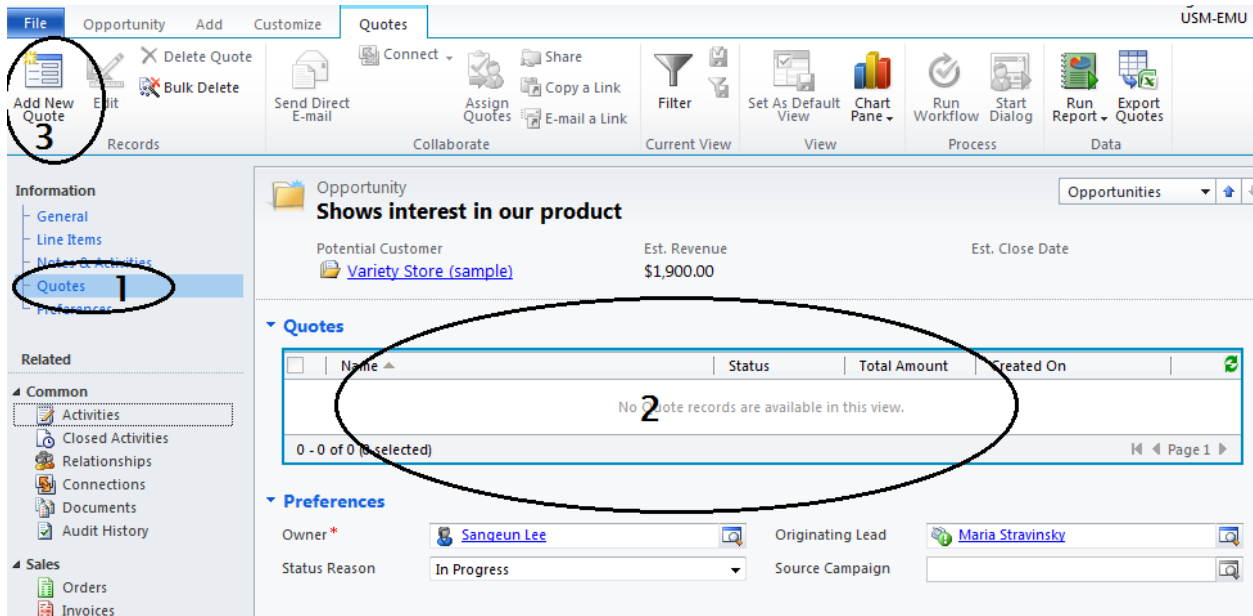
19. Click on the grid to add a new quote, and click on **Add New Quote**. As soon as

you click on the button, it will lead you to another page which looks like following.
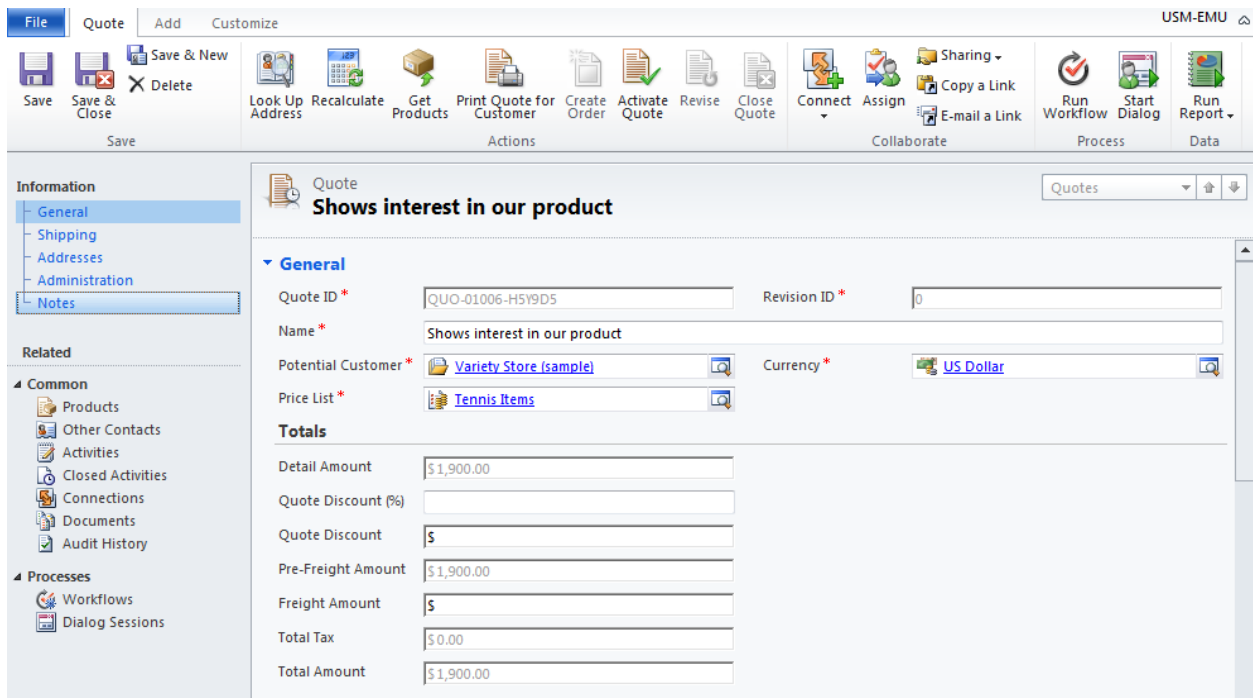
Make sure you click on 'Save'.

Now, go to the quote screen like following.
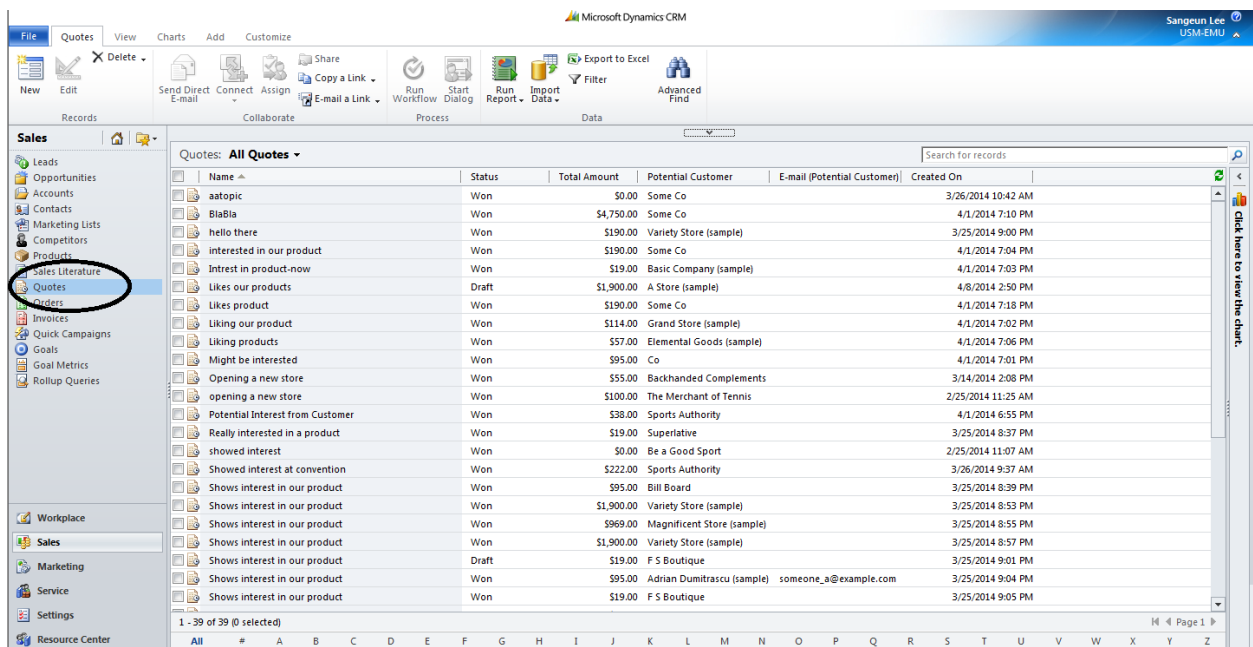
Before converting the quote into the order, choose and check the quote you made in

the previous step. Double click on your quote and you will see the following screen.
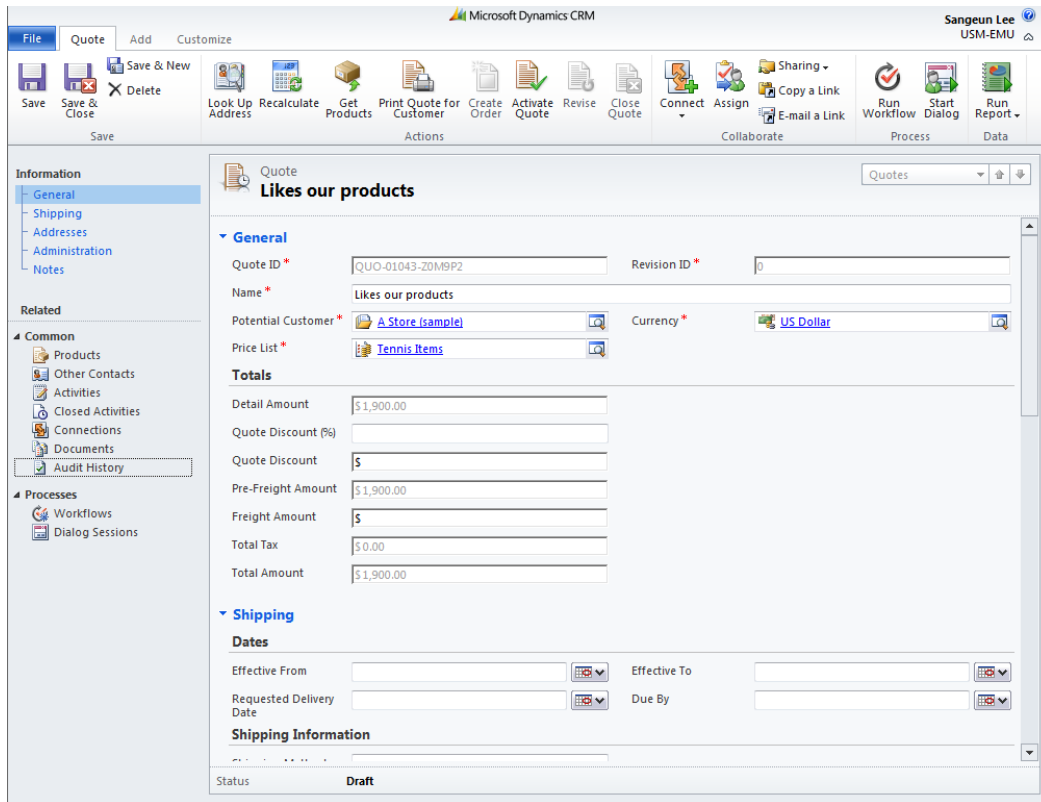
20.

Order

To make the quote into the order, first of all, you need to activate the quote. Click on Activate button(1). Then, click on Create Order(2) to create an order like following screen.
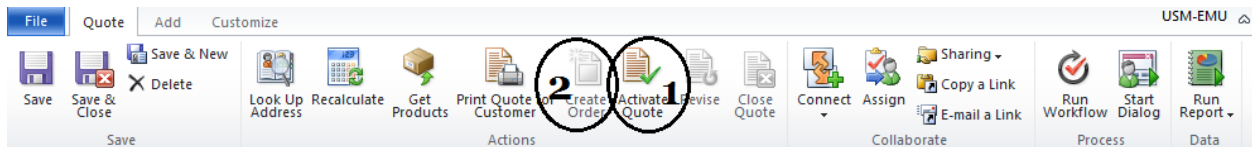
After following the steps above, you will get a following screen to enter details about the order.
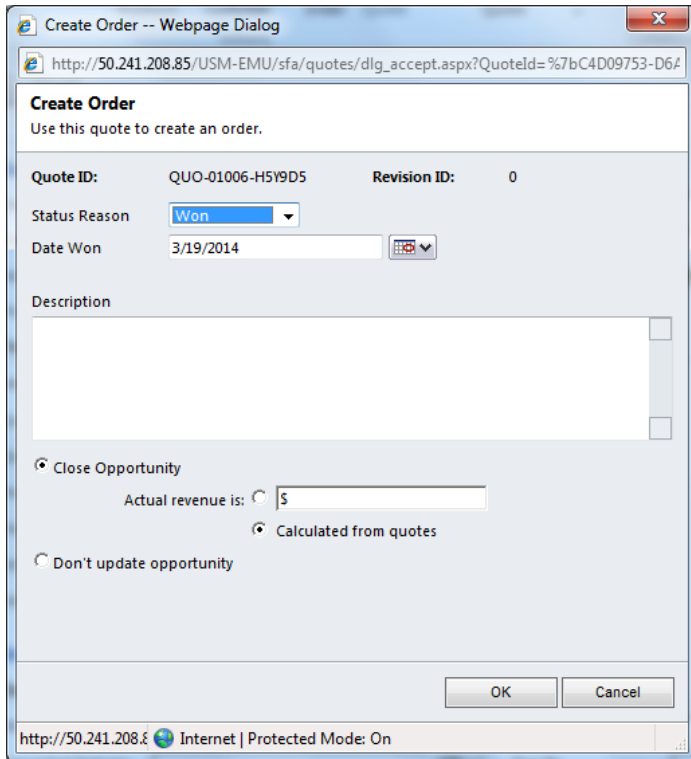
As soon as you create an order, the quote will be deactivated and the order will be

activated.

21. Click on OK, and you will be lead to a new window for the order you just created. In

this window, click on '**Create Invoice**' to create invoice. Create Invoice button is

marked in circle in the following screen.

22.

Invoice

What is difference between Order and Invoice?

Order:

Invoice:
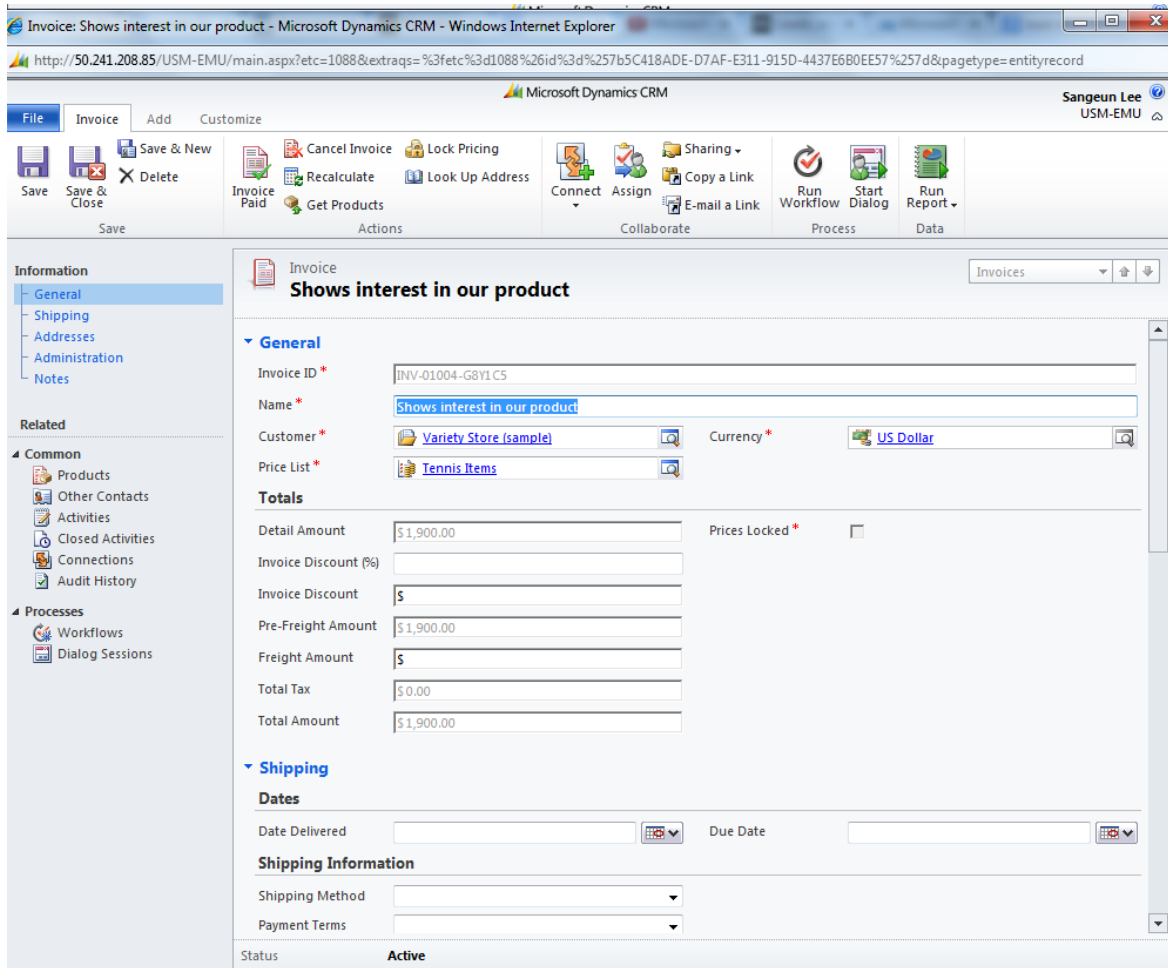
23. Save and Close.

24. Now you are done with Sales process. Please fill out the survey.

Thank you very much!

Research Methods

When participants were done with running the program, they were asked to finish a survey. The survey included questions about participants' interest in MS CRM after following the instruction for Sales module, if the procedure of creating an invoice was easy to follow, the responsiveness of user interface, user experience of screen design, and comparison between MS CRM and Microsoft GP if participants have ever tried Microsoft GP.

According to Kao, Chen, and Lee (2012), "Video-clip instructions have an impact on perceived ease of use and perceived usefulness of customer relationship management (CRM) software for brand management."

For the first survey, the three questions asking basic information about participants were not included. However, starting from the second survey, more questions were added to analyze participants, and investigate the relevance between participants' traits and the result of the survey. The added questions asked the participants about their gender and degree level. The question asking if they have tried the instruction in the last week was also included, because for the first conducted survey there were some errors which would be discussed later in the thesis. Each question had five rating scales ranging from one to five. One refers to 'not at all' and five refers to 'strongly agree'.

Participants of the survey were 30 graduate students in Masters of Science in Information Systems (MSIS) and 10 graduate students with their majors in Supply

Figure 2. Survey Questionnaire

Chain Management (SCM) at Eastern Michigan University. Majority of MSIS students

have experiences in supply chain programs and customer relationship management

programs such as SAP, Microsoft GP and etc. SCM students relatively have less

background about CRM programs. However, CRM processes are relevant to supply

chain processes, which will make it easier for them to understand the flow of CRM

better than MSIS students.

The Figure 2 on the next page is the survey questionnaire provided to

participants.

Figure 3. Survey 1 Response

Microsoft Dynamics CRM User Satisfaction Survey

Thank you very much for completing all steps in handout. Please fill out the survey.

* Required

Did you participate in the last week's survey?
- ◯ Yes (This is my second time)
- ◯ No (This is my first time)

What is your gender?
- ◯ Male
- ◯ Female

Are you a undergraduate or graduate student?
- ◯ Undergraduate
- ◯ Graduate

Microsoft Dynamics CRM was interesting to me. *

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strongly Agree

The procedure of creating invoice was easy to follow. *

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strongly Agree

The user interface of CRM was responsive. *

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strongly Agree

The screen design was user friendly *

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strong Agree

The speed of CRM was fast enough. *

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strong Agree

When compared to Microsoft GP, CRM is much easier to use
Answer only if you have tried GP before

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Strongly Agree

[Submit]
Never submit passwords through Google Forms.

Research Results

1st Survey

The first survey was conducted on March 25th, 2014 during Dr. Huei Lee's Information Systems 627 class. There were 13 participants who are MSIS students at Eastern Michigan University.

Prior to conducting the survey, there were issues when logging into the system. The server was not working well, which made participants unable to log in. Each student was given a user ID and a password, so that each of them can try different input data.

Survey 1 Response

Figure 4. Survey 2 Response

	1	2	3	4	5	6
Average	4.38	4.23	4.38	4.62	4.31	4.33
Standard Dev	0.49	0.97	0.74	0.49	0.61	0.67
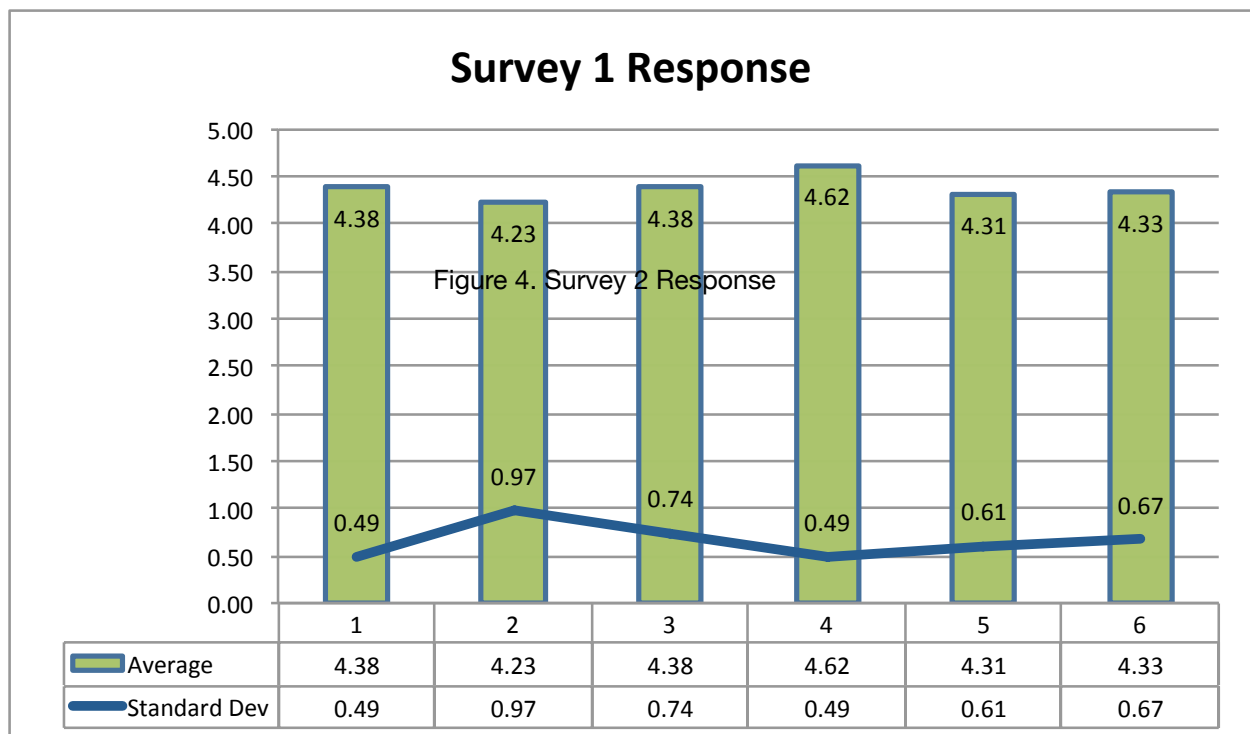
Participants tend to respond with high score. The averages of each question ranged from 4.23 to 4.62, which means that they were satisfied with their experiences on Microsoft CRM. Although participants rated Microsoft CRM relatively high, there were complaints about the manual. Most of the complaints were printing errors

occurred while converting the file and issues with popups. The errors were fixed in the second survey, however, the result was different from my expectation.

2nd Survey

The second survey was done to same participants as the first survey except for one participant. There were 17 participants in total, and most of the people who were not in the first survey In other words, they have already tried the instruction prior to the survey. I predicted that people would be more satisfied in the second survey than the first survey since errors were fixed according to participants' critiques.

The second survey was conducted on April 1st, 2014 to IS 627 students. To improve survey results, I participated in the class. It took 20 to 50 minutes for them to finish the survey. Some students asked me about minor questions related to manual, such as how to find a created lead.

Unexpectedly, user satisfaction decreased comparatively. The average of each question ranged from 3.92 to 4.15. My pre assumption was that people would be more satisfied since the popups were working well and some equivocal terms and figures

were fixed.

Survey 2 Response

	1	2	3	4	5	6
Average	4.08	3.92	4.08	4.00	4.15	4.00
Standard Dev	0.76	0.77	0.78	0.76	0.51	0.93

Figure 5. Survey 3 Response
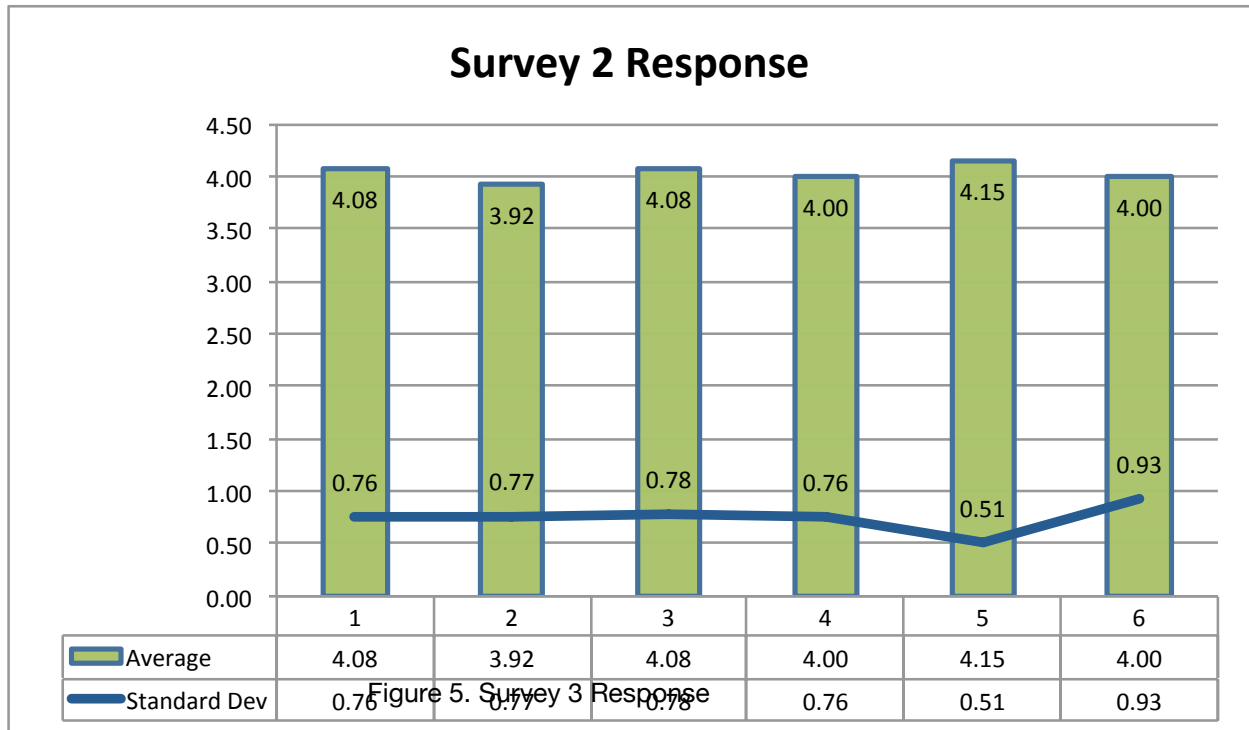
The figure above is the bar chart based on the average of survey 2 responses. The second question, which was asking the easiness of creating the invoice, got the lowest score. When the survey was done, there were a plenty of comments about the instruction. Rather than discussing how misleading the instruction was, most of the students suggested improvements. There were complaints about printing quality of instructions. However, this did not have a large impact on the survey.

When I reviewed the comments on the instruction, it was found out that participants' attitudes towards the survey was contrasting to their attitude towards the first survey. Particularly, they were more specific and intense in the second time than in the first time. As I attended the class for the second survey, it could have affected participants position. I perceived they were more engaging in the second survey.

Therefore, I could conclude that the presence of the survey conductor has an effect on the result.

Running the identical survey more than once had more impact than I expected. For the second survey, it was inferred that participants had higher expectation. Annotations they left on training manual were highly critical. They were detecting every step that was unclear. Also, when people try out same material twice, they can notice some issues they could not notice before. Therefore, participants were able to figure out more about the program than the first time they tried it.

3rd Survey

The third survey was coordinated on April 9th, 2014 to 10 graduate students majoring in Supply Chain Management (SCM). The average of overall survey scores was higher than the second survey. SCM students have different backgrounds from MSIS students. They were familiar with sales processes as well as supply chain processes.

There was only one student who has tried Microsoft Dynamics CRM before. Most of the students have tried Microsoft GP before, which helped them with getting used to a new program. There were more students who were interested in Microsoft Dynamics CRM than the students participated in the second survey. However, they did not find it easy to follow the procedures in Microsoft CRM.

Survey 3 Response
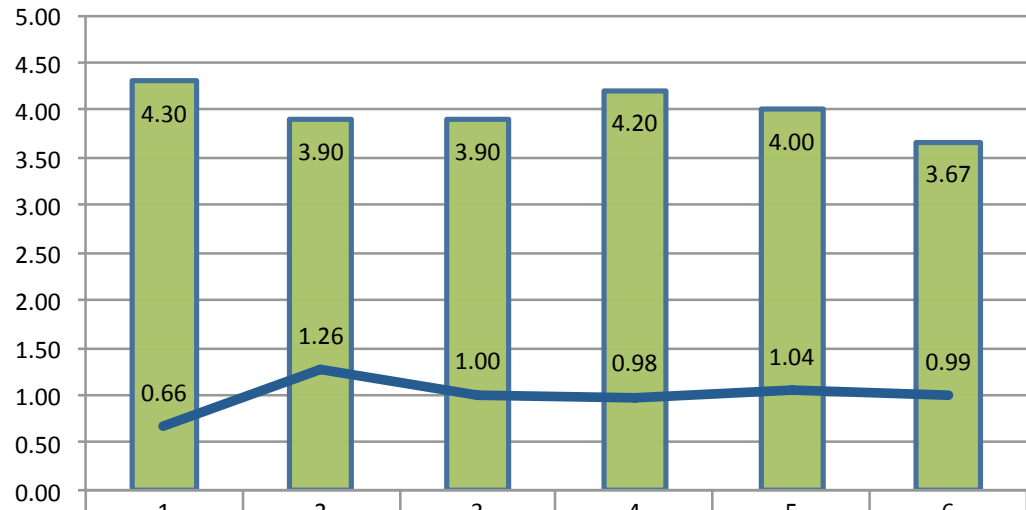
	1	2	3	4	5	6
Average	4.30	3.90	3.90	4.20	4.00	3.67
Standard Dev	0.66	1.26	1.00	0.98	1.04	0.99

Conclusion

The survey provided some helpful insights into the training manual. It was inferred that the interaction was somewhat satisfying for graduate level students. The overall average for all questions was 3.76, which means that they were slightly satisfied with Microsoft Dynamics CRM.

According to User Acceptance of Information Technology (Venkatesh, et al., 2003), there are several key factors affecting behavioral intention and user experience. They were gender, age, experience and voluntariness of use. In contrast, factors affecting behavioral intention and user experience with the training manual I provided were majors (academic backgrounds) and previous experiences.

Participants were first divided into two groups sorted by their majors, then divided again into two more groups sorted by their prior knowledge with CRM. Students' majors were Information Systems (IS) and Supply Chain Management (SCM). Students with IS majors have strong program application backgrounds. Therefore, they were proficient at dealing with various programs which enabled them to be less anxious when running a new program. MSIS degree requires students to execute various information system related programs such as SAP, Microsoft GP and etc. Consequently, they were more familiar with running a different program.

Nonetheless, students with IS majors struggled with understanding the sales procedure. They did not have hard time understanding concept, but apprehending the process entirely was challenging for them. When I was participating in IS 627 class, I recognized that they were uncertain about the flow of the sales procedure. For instance, coming up with topics in a lead and choosing a product was demanding

unless exact data was provided.

Students with SCM majors were stronger in understanding the procedure comprehensively. However, they were not familiar with executing a program they have never tried before. Only one student had tried Microsoft Dynamics CRM previously.

I concluded that both technical and theoretical aspects were needed when running a program successfully. Therefore, when Microsoft Dynamics CRM is provided to employees, they need to be familiar with handling unfamiliar programs and need to be taught underlying supply chain and sales processes.

The second group, which categorized participants into two groups by their previous experience with CRM, also provided an interesting insight. The participants' standpoints were different in the first survey and in the second survey. Since they have tried the same manual before, they gained more confidence in the second survey. Also, they were more engaging, as I could find significantly increased number of comments. Most of the comments were suggestions rather than detecting errors. There were some comments which were catching minor errors, but I could hardly find any major issues.

In the perspective of users, they want a program that can be used easily, responsive, and fast regardless of their backgrounds. I could observe that even students with computer related backgrounds wanted a program that is ease of use. As a result, prior to teaching employees Microsoft Dynamics CRM, employees need to understand related knowledge. They need to be acquainted with the Microsoft Dynamics CRM's definition of a lead, an opportunity, a quote, a order and an invoice. Microsoft CRM's terms are not contrasting from their original meanings but used in a different context.

Appendix A. Survey Responses Chart
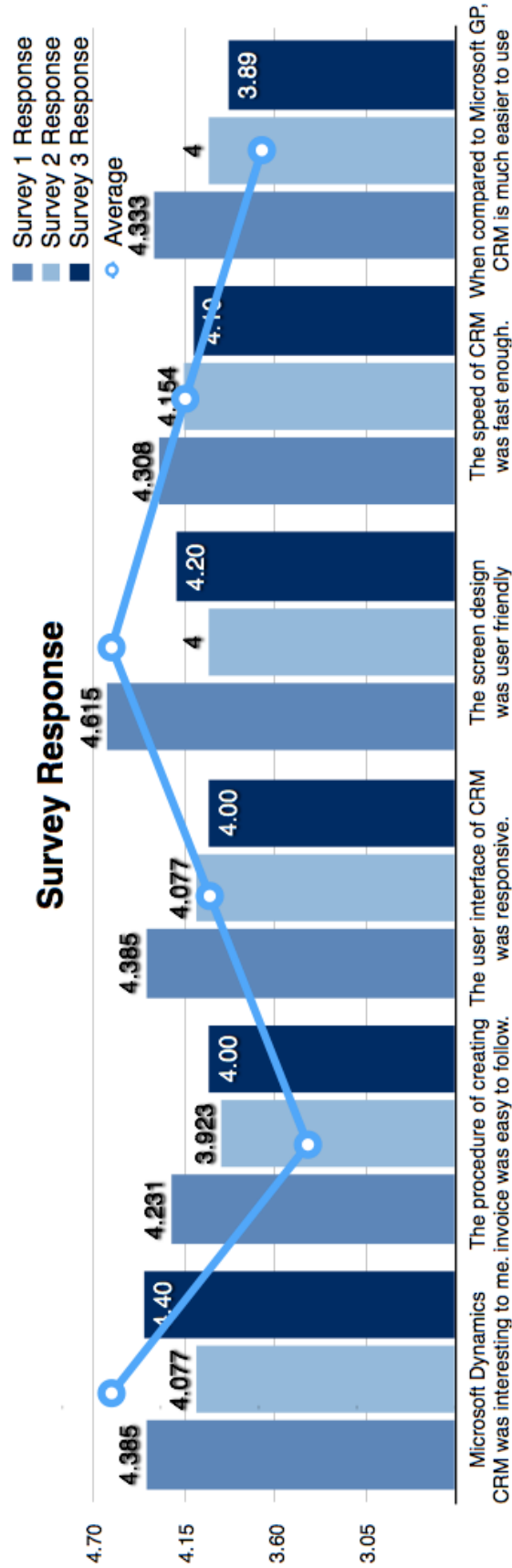
Appendix B. Survey Results Table

Survey Results

	1. Microsoft Dynamics CRM was interesting to me.	2. The procedure of creating invoice was easy to follow.	3. The user interface of CRM was responsive.	4. The screen design was user friendly	5. The speed of CRM was fast enough.	6. When compared to Microsoft GP, CRM is much easier to use	7. What is your gender?	8. Are you an undergraduate or graduate student?	9. Did you participate in the last week's survey?
IS627									
1	5	5	5	5	5	5			
2	5	5	5	5	5	5			
3	4	2	3	4	4	4			
4	4	4	3	4	5	3			
5	4	4	4	5	4	4			
6	4	3	4	4	4	N/A			
7	4	5	5	5	5	4			
8	5	5	5	5	4				
9	4	3	4	4	3	N/A			
10	4	5	4	5	4	5			
11	4	5	5	5	4	4			
12	5	4	4	5	4	N/A			
13	5	5	5	5	5	5			
Sum	57	55	57	60	56	39			
Average	4.38	4.23	4.38	4.62	4.31	4.33			
Standard Dev	0.51	1.01	0.77	0.51	0.63	0.71			
Participants 13									
IS627									
14	5	4	4	4	4	5	Male	Graduate	Yes (This is my second time)
15	5	4	5	5	5	N/A	Male	Graduate	Yes (This is my second time)
16	3	5	4	4	4	5	Male	Graduate	Yes (This is my second time)
17	4	4	5	5	4	3	Male	Graduate	Yes (This is my second time)
18	4	3	4	4	4	N/A	Female	Graduate	Yes (This is my second time)
19	4	4	4	5	3	4	Female	Graduate	Yes (This is my second time)
20	4	5	5	4	5	5	Female	Graduate	Yes (This is my second time)
21	3	4	4	5	5	5	Female	Graduate	Yes (This is my second time)
22	4	4	4	4	4	4	Female	Graduate	Yes (This is my second time)
23	5	2	5	5	5	3	Male	Graduate	Yes (This is my second time)
24	3	3	2	2	4	2	Male	Graduate	Yes (This is my second time)
25	4	5	4	4	4	3	Male	Graduate	Yes (This is my second time)
26	5	5	5	4	4	5	Male	Graduate	Yes (This is my second time)
27	4	4	4	4	4	4	Female	Graduate	No (This is my first time)
28	5	4	5	4	4	4	Male	Graduate	Yes (This is my second time)
29	5	4	4	4	4	5	Male	Graduate	Yes (This is my second time)
30	3	4	3	3	3	4	Female	Graduate	Yes (This is my second time)
Sum	53	51	53	52	54	48			
Average	4.08	3.92	4.08	4.00	4.15	4.00			
Standard Dev	0.78	0.79	0.81	0.78	0.53	0.96			
Participants 17									

SCM									
31	4	5	3	5	5	N/A	Female	Graduate	No (This is my first time)
32	4	4	4	4	4	5	Female	Graduate	No (This is my first time)
33	5	3	4	4	5	4	Female	Graduate	No (This is my first time)
34	4	4	4	4	3	3	Male	Graduate	No (This is my first time)
35	5	5	5	5	5	5	Female	Graduate	No (This is my first time)
36	3	3	2	2	2	2	Female	Graduate	No (This is my first time)
37	4	5	5	5	4	4	Male	Graduate	No (This is my first time)
38	5	5	5	5	5	3	Female	Graduate	Yes (This is my second time)
39	5	1	3	3	3	4	Female	Graduate	No (This is my first time)
40	5	5	5	5	5	5	Female	Graduate	No (This is my first time)
Sum	44	40	40	42	41	35	0	0	0
Average	4.40	4.00	4.00	4.20	4.10	3.89			
Standard Dev	0.70	1.33	1.05	1.03	1.10	1.05			
Participants	10								
Total	40								
Total									
Sum	154	146	150	154	151	122			
Average	3.85	3.65	3.75	3.85	3.78	3.70			

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