

Executive Summary

Nails and Spa Too is a local beauty salon located in Highland, UT. Over the course of 12 years, their humble business expanded from a single salon in American Fork, UT to the opening of a second store in Highland. Recently their original store in American Fork was sold to other owners. As a small business, many of the technological amenities commonly found in larger franchised salons are not available. One such example is an electronic service recorder to track the services being completed by each technician. As a result of not having this data recorded, each employee must keep track of their work completed on slip of paper and total the service charges and tips at the end of the day. Through personal experiences viewing this procedure, approximately 30 minutes are spent waiting while each employee totals and records their work for the day. This lengthy process was the inspiration for my final project. My goal was to replicate the current procedure in the simplest way possible while giving the owner the tools necessary to track what services were completed by each technician, the amount charged to the customer and applicable tips given by the customer. This process needed to be general enough to capture all work completed by each employee, while being specific enough for each employee to track daily work and expected pay. The solution was through a simple to understand UserForm and multiple worksheets to record the data being entered.

Implementation

The basis for the entire project was to replicate the small slip of paper that each employee would record their completed work on. This was done through a UserForm which provided the foundation for how each piece of data would be recorded.

The screenshot shows a 'Customer Ticket' window with the following elements:

- Customer Number:** 18
- Date:** 4/13/2015 12:04:07 AM
- Walk In / Appointment:** Walk-In (selected), Appointment, Group Payment (checkbox)
- First Name:** [Empty field]
- Last Name:** [Empty field]
- Customer Email:** [Empty field]
- Table:** A table with columns: Service, Technician, Cost, Tip. The table body is currently empty.
- Buttons:** Add Service, Cancel, Save/New.
- Other Fields:** Discounts (dropdown), Tip (input field), Total (input field).

- **Customer Number** – this provides a unique number for each customer who enters the salon. This number could represent a single customer or a group.
- **Date** – The date is one of the most important pieces of information on the userform. By having a timestamp of the service, the owner can match up credit card transaction with completed services quickly. This also provides a way to track the total work completed for the day by adding the summing across each record with matching dates.
- **Walk in/Appointment** – This option box is a small tool to gather more information about each customer who comes into the salon. While not a critical piece of information, the option box allows management to get a quantifiable number of how many walk in appointments happen throughout the week. This could be used for employee scheduling purposes, or as a means for marketing.

- **Group** – This checkbox interacts with the customer number as well as the list box found below. When checked an input box is opened to allow a numeric value to be entered to specify the size of the group. This becomes useful in situations where there might be multiple customers in a single transaction.
- **First Name / Last Name** – These boxes provide a name for each customer which could be used in the future for automated email purposes.
- **Email** – Email address can be entered for automated email purposes, as well as providing an identifier. This could be used to look up a person to see what services were completed previously. Currently, this feature is not used, but serves as information which could be used in the future.
- **Service List** – This list box acts as a visual for each service that was completed. There are four areas of information, Service, Technician, Cost, and Tip. Information is added through the Add Service button and additional UserForm.

Service	Technician	Cost	Tip
Pedicure	Michelle Ngo	25	0
Waxing	Tracy Dinh	12	0
Designs	Tuyet Truong	5	0

- **Add Service** – This button enables the user to add a service, the technician, and the cost associated with the service through combo boxes and a text box.

- **Add a Service** – This hyperlink-esq button opens an input box that allows the user to add a new service to the combo box
- **Add an employee** – the button allows the user to add a new employee name along with their commission rate. It generates a new worksheet for the employee with a standard format, and inserts macros to enable the user to gather daily, weekly, and monthly totals.
- **Discounts** – discounts offer the user a variety of common discounts to provide for the customer. Many times there are situations that warrant a discount and the provided list offers an assortment to best meet the user's needs. These values are hardcoded in and thus if additional discounts are needed, a small addition to the code would be needed. I opted against adding a "Add Discount" button to avoid irregular naming patterns, and difficulty of coding both dollars off, and percentage discounts.

- **Total** – The total is summed from each of services entered in the list box. This number does not include the tip due to tips being at the discretion of the customer after the total has been paid.
- **Tip** – tips are done after the customer has been given the total. This number is divided evenly among the individual services based on the cost of the service. This is done due to the fact that many times one employee can't provide the customer with every service wanted due to licensing restrictions.

Customer Ticket

Customer Number: 1 Date: 4/13/2015 12:30:11 AM Walk In / Appointment: ☒ Walk-In ☐ Appointment ☐ Group Payment

First Name: Jane Last Name: Doe Customer Email: jdoe@gmail.com

Service	Technician	Cost	Tip
Pedicure	Michelle Ngo	25	5.95
Waxing	Tracy Dinh	12	2.86
Designs	Tuyet Truong	5	1.19

Add Service Discounts: 20% OFF Tip: 10 Total: **33.6**

Cancel **Save/New**

- Save/New – this button save the information on the UserForm in two places. The first is the “Customers” worksheet that contains all the information about each customer visit. These are ordered sequentially by customer order in a table format for ease of viewing. The second place is the “AllEmployees” worksheet. This worksheet is similar to the “Customers” work sheet but provides an individual entry for each service completed by each employee for an individual customer.

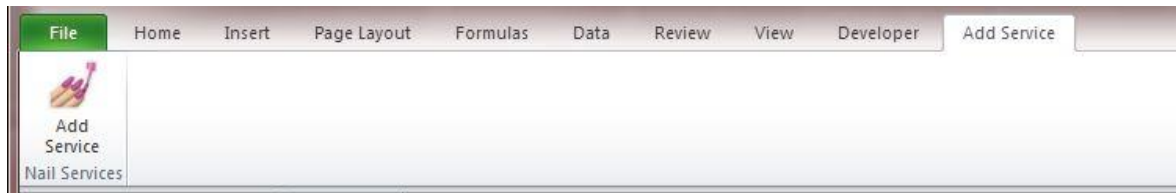
	A	B	C	D	E	F	G	H	I	J	K
1	Customer ID	Date	First Name	Last Name	Email	Services	Total Price	Tip	Discounts	Walk In/Appointment	Group
2	1	4/13/2015 0:44	Jane	Doe	jdoe@gmail.com	Pedicure, Designs	25		8 \$5 OFF	Walk-In	
3	2	4/13/2015 0:44	John	doe	johnd@yahoo.com	Mani/Pedi, Take Off	54		15 10% OFF	Appointment	
4											
5											

	A	B	C	D	E	F
1	Customer Number	Date	Service	Employee	Service Cost	Tip
2	2	4/13/2015 0:44	Mani/Pedi	Tracy Dinh	45	11.25
3	2	4/13/2015 0:44	Take Off	The Ngo	15	3.75
4	1	4/13/2015 0:44	Pedicure	Michelle Ngo	25	6.67
5	1	4/13/2015 0:44	Designs	Tuyet Truong	5	1.33

- Daily, Weekly, Monthly Totals – these buttons calculate all services for an individual employee for the day. The worksheet is reset each time the button is clicked to prevent duplicate entries. Pieces of information in other parts of the workbook are brought in such as Commission Rate, and the final amount is given to indicate the amount earned for the day.

Today's Service Totals		
Day Total	Number of Services	3
	Total Service Charge	80
	Commission Rate	0.5
	Sub Total	40
	Total Tips	35
	Total	75
Weekly Service Totals		
Week Total	Number of Services	2
	Total Service Charge	45
	Commission Rate	0.5
	Sub Total	22.5
	Total Tips	20
	Total	42.5
Month's Service Totals		
Month Total	Number of Services	2
	Total Service Charge	45
	Commission Rate	0.5
	Sub Total	22.5
	Total Tips	20
	Total	42.5

- Ribbon Modification



Discussion of Learning

Through the process of creating this project I realized the amount of material that was covered in the course. I came into the course with no knowledge of VBA and after just a few short months it amazed me at the amount that I was able to accomplish. However, as I search for answers to questions online, I realize the depth that VBA programming holds. Many items that I implemented into my project were covered in the class and then tweaked to fit the situation. I found I utilized almost every portion of the UserForm project as well as other pieces of assignments done as homework. I think the greatest addition to the project came from a meeting with Dr. Allen when we changed from having multiple combo boxes to the list box and using a separate UserForm to display the combo boxes. Initially this change was confusing and it took a considerable amount of time to understand the process, but in the end, it resulted in a much more simple design with greater utility.

Conceptual Difficulties

One major challenge that I encountered was the need to change or modify tips. At the present, the tips are generated based on the service cost and divided among the number of services. This results in a fair tipping scale, but offers no modification to the user if needed. I discussed this issue with Dr. Allen and he offered a solution that would work but required additional programming outside the bounds of the project.

A second major challenge that I faced, was the creation of individual worksheets for each employee that contained the needed information along with the macros and buttons associated with each aspect in the workbook. Getting the data to format as a table, and then having the applicable code to reset the table and execute the desired outcome proved to be a difficult challenge that I didn't expect. Overall, I realized that programming for situations with an assumed user input was relatively easy, however, programming for situations outside the "normal" scenarios proved to be a great hurdle that required some of the greatest allotments of time.

Additional Features Not Included

Over the course of the project there were a few pieces of information that I wanted to implement but was unable to due to time. These include better formatting of data into tables, generating plots for the number of services by weekday, a way to modify tips, calculating weekly and monthly totals for all employees, fixing the difference in service cost and final cost (with a discount) for the daily, weekly, and monthly employee totals. As well, there are few situations where erroneous data could be entered into combo boxes that I would like to fix to prevent users from adding erroneous employees and services.

Assistance

The only assistance that I received for this entire project was the help from Dr. Allen on 3 separate occasions which resulted in approximately 2 hours of help. Additionally, the use of YouTube videos, and example code was utilized from online sources. Chunks of code were not used in their entirety, but the methodologies were used in my project.