## SPECIAL ISSUE:
## TEACHING CASES

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# INFORMATION SYSTEMS
# EDUCATION JOURNAL

## Editors

*Teaching Case*

# Styles by Ashley:  A System Design and Development Case

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## Abstract

Ashley Baker was fed up and ready to strike out on her own and cut her own path.  New salon policies aimed to eat away at her profits were forcing her to start her own business.  As Ashley and her husband refurbished a downtown storefront to house her shop, she starts planning for the operational side of her new venture.  Ashley is in search of an affordable salon customer management system.  She solicits the help of one of her clients in exchange for hair services.  The case provides a realistic scenario that can be used in a systems analysis and design, database development or graduate level management information systems course.  The case focuses upon the development of a hair salon customer management system to sell products and services.  Multiple assignment options are provided allowing instructors to select an assignment based upon course material coverage.  Suggested assignments include the development of process modeling diagrams such as data flow and swim lane diagrams, a request for proposal for an existing system and a response to the request for proposal, and database design and development artifacts.

**Keywords:** Teaching Case, Process Design, Swimlane Diagrams, Database Design, RFP

### 1.  INTRODUCTION

Over the past ten years, Ashley Baker had developed quite the reputation in her small town of Whispering Hills, Missouri for her ability to style hair.  She was an accomplished hair stylist at Lavish Locks Hair Salon and had developed an extensive following of loyal clients.   Ashley's appointment book rarely had an opening and she occasionally lost prospective clients to other stylists due to her fully booked schedule.

A rumor had been floating around the salon that Bev, the salon owner, wanted to deduct another usage fee from the stylists' commission percentage.  Another rumor indicated that an additional fee would be charged to stylists unable to accept walk-in customers, as such a problem stifled growth.  Ashley felt that the commission rate was already pretty low and hated the thought

of being penalized for building her business.  Her husband, Steve, had suggested that she strike out on her own; but she had quickly dismissed the idea as "crazy."  With each passing day, the idea looked a little less crazy.

With Steve's support, Ashley found a small storefront in the trendy downtown area of Whispering Hills and set about opening her own shop.  Together, they renovated the building at night so she could maintain her steady income during the day and keep her clientele.  It would soon be time to strike out on her own.  Thus, she needed to start focusing her attention on the business side of operations.

Lavish Locks had a fairly extensive system in place for managing customer data, setting up appointments, sending out appointment reminders and handling payments. However, she

knew she couldn't afford such an elaborate set-up. She had heard that there were affordable programs available for small businesses like hers; but she wasn't sure which one would provide "the biggest bang for her buck." She now had a new issue to keep her up at night.

## 2. HELP IS ON THE WAY

Monday morning rolled around and Ashley had a five-minute break between customers at Lavish Locks. Her mind wandered to the nagging prospect of finding an acceptable system and getting her client data transferred into it. A friend had told her to download the data as a csv file, but she wasn't really sure what to do from there.

A soft ding from her phone brought her thoughts back to the present. Her next appointment, Connie, had just sent her a text to let her know she would be a few minutes late. That was enough time to pull up Connie's client profile and review her notes.

The profile screen was fairly detailed. Connie's profile included a picture of her hair from the last appointment, a description of what she wanted done during her current appointment, a detailed description of how her hair had been most recently cut and styled, a link to a history of the descriptions of her previous appointments and a brief biographical sketch. The notes in Connie's biography indicated that she was employed as a systems analyst and was working part-time on getting her MBA. Ashley wondered if Connie might have some ideas for finding an affordable appointment system to help her business get started.

## 3. THE APPOINTMENT

After Connie had caught Ashley up on the latest developments in her life, Ashley brought up the subject of her future business endeavors and the need for an affordable customer management system. "Connie, in your business courses at the university, have you heard of any software that can be used as an appointment scheduling system?"

"I know that there are some programs out there to make the process easier, but the only one with which I am familiar is the one that Square offers. Unfortunately, I have not personally used it. I am sure there are other choices available, but I don't know what features they offer or their prices," Connie noted.

"I honestly don't know where to start or how to compare programs. I should have started looking months ago, but I let other things take priority. Connie, I know that you work with new systems all of the time. Do you have any recommendations for getting started? Or, better yet, would you have time soon to come over and help me find the best program? I could add free highlights to your hair while we worked." Ashley added.

"I know you are pretty busy putting the finishing touches on your new business. What if I see what I can find for you when I get home and you can highlight my hair when I bring you the results?" Connie offered.

"That would be great! Thank you so much, Connie! Do you think there might be an affordable system that also offers the ability to monitor inventory?" Ashley asked.

"I'm guessing that a scheduling system like that might manage storefront inventory; but it may not manage back office products that you would use during client visits. It may also be somewhat limited to the amount of information that it collects regarding individual client preferences and history; but I'm not sure. I'll have to look into that for you too. If an affordable off-the-shelf system does not, I could create an additional small database for you to monitor inventory and to maintain information on your clients. We're supposed to come up with a project for my information systems class at the university. We could kill two birds with one stone," Connie suggested.

"Connie, that would be outstanding. Thank you for the offer! I don't have the time right now to look into the software, nor the finances to buy an elaborate system. Steve and I have been investing all of our excess cash into renovating the new shop, 'Styles by Ashley'," Ashley beamed. "But, we could work out a payment plan in haircuts, colorings and other salon services. What do you think?"

"I'm all for that!" Connie exclaimed. "Why don't you give me a description of the processes associated with a hair salon business and what your dream front and back office systems would be able to do. That will give me some ideas of what you would like for me to try to find for you," Connie offered.

"Steve and I will work on it over the next few days. Can you come in Saturday morning for a color refresh and a chat?" Ashley asked.

"Perfect! Connie exclaimed.  "I'll see you then."

## 4.  SALON PROCESSES

When Saturday rolled around and Connie arrived for her appointment, Ashley was ready.   "Hi Connie.  Thanks again for helping me.  Let's get you settled in a chair and I'll tell you my line of thinking.  Steve and I have put a lot of thought into what processes we would like the system to support and what we would like it to do.  If you could find something affordable that offers similar capabilities to what Lavish Locks' system has, that would be fantastic!  Let me tell you about their system.

The system contains information about clients, stylists, appointment schedules, products and inventory.  When a new client makes an initial appointment, she completes a form providing a little background about herself as well as her phone number, address, email address and preferred mode of contact.  Each time the client visits, history is recorded in the system about that client's visit.

Stylists enter their schedules each week into the Lavish Locks' system.  This allows the receptionist to schedule appointments as well as the clients to log in through the web site to schedule their own appointments.  Two days before the date of the appointment, the system sends out a text or an email to the client to remind her of the upcoming appointment and to give the client an opportunity to reschedule if plans have changed.  On the morning of the appointment, another text or email is sent to the client to serve as a reminder of the upcoming appointment.

At the beginning of the workday, the hair stylist receives a summary report of the appointments she has scheduled for the day.  This report gives the clients' names, appointment times, latest haircut pictures, brief description of what clients' want done and a brief bio of the clients.  About five minutes before the client arrives, the stylist receives a reminder on her phone about the client coming for the next appointment.

Once the appointment is finished, the stylist updates the customer's record, on her phone, with a description of the services that were performed.  If the client allows, a picture of their hair is taken to upload for future reference.

The customer pays the receptionist as she leaves and receives a receipt for the services performed.  At that time, the client is asked about scheduling another appointment and reminded that she can do that online if she prefers.

The web site is also connected to an online database of inventory that is offered for sale in the store.  Customers are able to purchase those items during their visit to the store or online.  The online system accepts debit/credit and PayPal payments.

Stylists operate as independent contractors and purchase store products at cost for use during customer visits.   However, an inventory is maintained of products that are not for sale over the counter such as hair color, permanent solutions, curl activators, straightening products, wax, etc.  These items are charged to the stylist along with the in-store products that are purchased.  The system bills each stylist at the end of the month for booth rental as well as for the products that they used.  The total cost of items used comes directly out of the stylists' income each month.

The receptionist uses the system to print reports each month such as inventory levels and purchases, total sales generated in the salon, income earned by each stylist, total products purchased by stylists and customers, and total appointments provided by each stylist.  Bev, the owner, receives all of the reports, but copies of the individual stylists' reports are shared with each stylist.  The company books are kept in a separate accounting software, I think, QuickBooks. I plan to do the same thing."

"That sounds like a good plan.  Do you think it would be possible to see some of the reports that the system generates so I can see what kind of data is collected?  Also, can any of the data in the system be downloaded in a file?"  Connie asked. "Also, what kind of computer hardware will you be using in the shop to access the system?"

"Sure. I can get copies of reports for you.  I also have a csv file of my customer list that I can show you too," Ashley added. "I'm not really sure what all I can do with that file.  I don't have any technology purchased yet.  All that I need right now is a point-of-sale system and a laptop or tablet that can connect to the Internet. My dream is to rent out booth space to multiple stylists and to provide each of them with a tablet as well.  The shop has space for three more booths."

"Let me see what systems are currently available and how much they will cost.  I can also give you a cost estimate on the hardware you will need to

purchase as well.  I'll try to get that for you next week," Connie remarked.

"Why don't you come in next Saturday and I'll add some highlights to your hair.  We can discuss it then," Ashley said as she handed Connie a mirror to inspect her new hair color.

"I started looking at salon management systems this week," Connie offered.  "From what you have described, I think I can find some online systems to suggest.  We can look at them next week.  I'll also have some suggestions for hardware to use.  The reports the Lavish Locks system produces will come in handy as we discuss my suggestions as well."

"I can't wait to see what you have for me next week!"  Ashley exclaimed as she walked Connie to the door and picked up her phone to enter next week's appointment.

**APPENDICES**

**Customer Profile Example**



# AMBER
## Smith

## Appt:  6/2/19 @ 9:00 a.m.

**PROFILE**

Amber has a natural curl to her hair. She likes to keep her hair about shoulder length.

She usually runs a bit late as she often comes from taking her children to school.

**CONTACT**

PHONE:
573-555-1212

EMAIL:
Amber@emailexample.com

**PERSONAL**

**Husband:** Robert
**Son:** Bobby
**Daughter:** Alley

**LAST APPOINTMENT**

Wash, cut and style
Had a little cut off the ends

Would like to try something new at next appointment; but does not know what. Need to find style examples to show her.

**APPOINTMENT HISTORY**

6/2/2019:  Wash, cut and style
5/2/2019:  Highlight, wash, cut and style
4/2/2019:  Wash, cut and style
3/3/2019:  Dry cut

**HOBBIES**

Photography
Cycling

**Client Invoice Example**

# Invoice No. 19510                          6/2/2019

Amber Smith
100 Pine Bluff
Whispering Hills, MO 63101

| Quantity | Resource Description | Unit Price | Total |
|---|---|---|---|
| 1 | Wash, cut and style | $45 | $45 |
| 1 | Organic shampoo | $15 | 15 |
| 1 | Organic conditioner | $12 | 12 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | Subtotal |  | $72.00 |
|  | Taxes (8%) |  | 5.76 |
|  | Total |  | $77.76 |
|  | Tip |  |  |
|  | **Total** |  |  |

Thank you for your business. We look forward to seeing you again.

**Hair Stylist Daily Appointment List**

## Ashley Baker's Daily Appointments
### Date: 6/01/2019

|   | Client ID # | Time | Name | Appt. Description | Price |
|---|---|---|---|---|---|
| 1 | AB18151 | 9:00 a.m. | Amber Smith | Wash, haircut, style | $45 |
| 2 | AB18025 | 10:00 a.m. | James Adams | Wash & haircut | $35 |
| 3 | AB18152 | 10:30 a.m. | Betty Smith | Wash, haircut, color, style | $155 |
| 4 | AB18056 | 1:00 p.m. | Lisa Martin | Wash, cut & highlights | $85 |
| 5 | AB18098 | 2:00 p.m. | Susie Martin | Wash, cut and perm | $145 |
| 6 | AB18024 | 3:00 p.m. | Tony Adams | Dry cut | $25 |
| 7 | AB18066 | 4:00 p.m. | Jane Wilson | Wash, cut, color | $135 |
| 8 |  |  |  |  |  |

**Lavish Locks Monthly Stylist Income/Expense Report Example**

# Styliest Income/Expense Report　　　May 2019

## Ashley Baker

| Quantity | Resource Description | Unit Price | Subtotal | Cost | Total |
|---|---|---|---|---|---|
| Income | | | | | |
| 30 | Wash, cut and style | $45 | $1,350 | | $1,350 |
| 25 | Wash and haircut | $35 | $875 | | 875 |
| 20 | Dry Cuts | $25 | $500 | | 500 |
| 15 | Highlights | $50 | $750 | | 750 |
| 20 | Coloring | $110 | $2,200 | | 2,200 |
| 7 | Organic shampoo sold | $15 | $105 | | 105 |
| 5 | Organic conditioner sold | $12 | $60 | | 60 |
| | Tips | | $750 | | 750 |
| ... | ... | ... | ... | | |
| | | | | | |
| Expenses | | | | | |
| 3 | Organic shampoo | $8 | | $24 | $24 |
| 2 | Organic conditioner | 7 | | $14 | 14 |
| 1 | Monthly booth rental | $250 | | $250 | 250 |
| | No new customer generation | $25 | | 25 | 25 |
| 5 | Hair Spray | $8 | | 40 | 40 |
| | | | | | |
| | | | | | |
| | Income | | | | $6590 |
| | Expenses | | | | 353 |
| | Subtotal | | | | $6237 |
| | | | | | |
| | **Total Revenue** | | | | **$6237** |

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