
1st OCTOBER 2019 / For the Montreal Eaton Centre Development Project

ECSE 326: Software Requirements Engineering
Fall 2019

Deliverable 1: High-Level Requirements Document
Group 1

Christopher Boustros - 260840947

Elie Elia - 260759306

Carl Elkhoury - 260806273

Patrick Ghazal - 260672468

Preyansh Kaushik - 260790402

Ragheed Qasmieh - 260780556

Muhammad Anas Shahid - 260786586

I. Vision Statement

For customers of the Montreal Eaton Centre Development (MECD) who aim to shop or dine at the various outlets in the Eaton Centre. The Shelby Loyalty System is a software application that allows the user to gain access to rewards from shopping or eating at the restaurants/cafes in the Centre. Due to the new incentives given to the customers, MECD shall experience an increase in sales and gain customer's trust and loyalty. Unlike the current loyalty programs of individual brands offered at specific retail and dining outlets, our product aims to introduce an integrated loyalty program at the Eaton Centre which will gauge more audience and entice customer loyalty.

II. Project Scope

The final product shall be a mobile application, available on iOS and Android. The application is expected to be completely operable by the final deliverable, as the Centre does not have the resources to maintain the app. The purpose of the application is to improve the overall customer experience at the Eaton Centre, specifically by implementing the following key behaviours: (1) creation of a Centre-wide loyalty program (2) exclusive offers for users of the app (discounts and reward points) (3) other shopping-related services such as interactive maps of the Centre or parking payments.

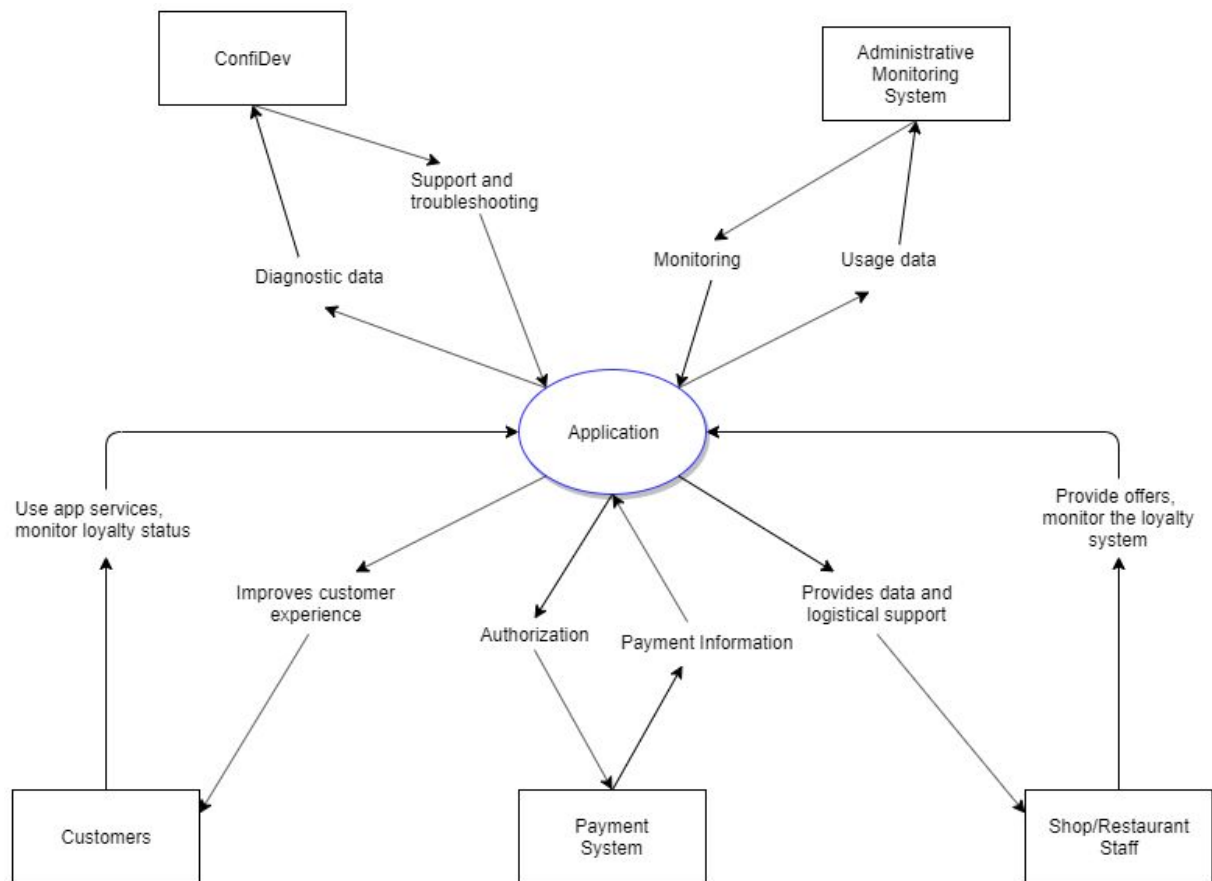
Three types of stakeholders will interact with the application. Customers will be able to use the application as described above during their shopping experience. Further subdivisions within customers shall be determined to enhance the application's interactiveness and personalization. The staff of the shops/cafés/restaurants will also use the application to display discounts on the app, and in return, the application will provide them with user analytics. Finally, the Centre's administration will have access to the application, mainly for monitoring and moderation purposes.

The application is expected to be as intuitive as possible, requiring as little as one day to train administrators, a few hours for shop/restaurant staff, and virtually no training for consumers. It should be operable 24/7, with an emphasis made on the Centre's business hours (with a 1-hour buffer before and after), as well as, during holiday periods.

The application is expected to persist customers' private information. As such, privacy and security are of paramount importance. This includes not selling data to third-parties and preventing any leakage of information.

A document entailing the description of the system is required by November 5th 2019. A finalized and improved system documentation is required by the customer on November 26th. The finalized system documentation is to be discussed between Confidev Consulting and the client in a meeting on November 28th.

Context Diagram



III. Goals/Business Requirements

To gain a better understanding of the goals addressed by the Eaton Centre, Confidev Consulting has obtained and compiled a list of the main business objectives as stated by the stakeholders.

Business Objectives

1. The MECD's business goals in order of priority are to increase sales, more repeat business of its customers, and enhancement of their public image.
2. The MECD's core key value is to earn as much net profit as possible.
3. The MECD's goal is to leverage the opportunities in the crossover between the dining and shopping experiences of its customers to increase customer return rate to the Centre.

Business Requirements

1. The MECD wants the loyalty program to interact with the program's users through push notifications.
2. MECD wants the loyalty program to operate within mobile environments of shoppers.
3. The MECD wants government offices and real estate within the Eaton Centre to be excluded from the loyalty program.
4. The MECD wants the loyalty program system to operate for 24 hours a day, 7 days a week.
5. The MECD wants the loyalty program to have a different viewpoint for the consumer, restaurants and shop owners, and the Centre administrators.
6. The MECD wants every system viewpoint of the loyalty program to have a tailored and curated user experience.
7. The MECD wants the loyalty program system to store user profile information that complies with basic privacy laws.
8. The MECD wants loyalty program system to operate without requiring any additional hirement of a new member of staff
9. The MECD wants the loyalty program system to be operable by its shop, restaurant, and café owners in less than one day of training.
10. The MECD wants the loyalty program system to be operable by customers without any prior training.
11. The MECD wants no downtime of the loyalty program system during peak shopping periods.
12. The MECD wants the system's user interface to be adapted to the category of stores, restaurants, or cafés that a customer most frequently visits.
13. The MECD wants an incremental approach of deliverables prior to delivering the complete system.

IV. Stakeholders

1. Mr. Shane McIntosh -- CEO & CTO of Montreal Eaton Centre of Development (MECD)

Mr. Shane McIntosh is the sole client interested in the success and viability of the solution. He is keen to optimize mostly the customer interaction and satisfaction at the store. Based on the elicitation interview with Shane, he represents values of mostly Achievement, Power, and Self-Direction. Shane seems ambitious in his vision, as he is more persistent on optimization rather than seeking to rectify a current problem. Shane's position comes from strength, willing to preserve his company's public image by improving customer satisfaction at the Centre. There is a huge role of self-direction as well as Shane seems curious and defines his company's own goals to achieve better satisfaction at the Centre.

Values: Ambitious, Curious, Preserving of public image

2. The Business - Montreal Eaton Centre of Development (MECD)

The Montreal Eaton Centre of Development is supported by a myriad of local businesses, ranging from restaurants, cafes, shops, to government bureaus and rental offices. As per the elicitation interview, MECD respects its staff and wishes for a solution that complements and integrates well with its current operations. MECD's key goal is to increase sales and profit, and seeks to do so by optimizing satisfaction at their Centre. MECD values wealth in a way that enhances their social image.

Values: Wealth, Social Recognition, Equality

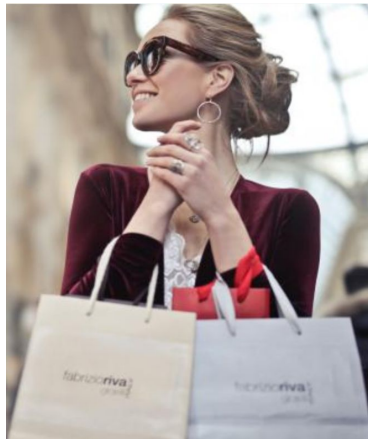
3. Users

The system will have multiple users, with different viewpoints and tailored experiences. These are described in more detail in the next section. For the users, the system must be intuitive, easy, and enticing to use. Users of the system, excluding administrators, should benefit from the system by having improved customer satisfaction as they go about shopping at the Centre. As per the elicitation interview, there are training slots assigned for administrative users (MECD Staff), but for the rest, the system must be intuitively user-friendly.

Values: Curious, Enjoying life

V. Users of the System

Persona #1: (Written by Preyansh Kaushik)



¹ [Clothes Shopper]

Violet Baudelaire

A McGill University student who lives and breathes fashion.

Violet, born and raised in Montreal, is a classics student at McGill University. Her passion in life is fashion, and she has over 100,000 followers on her online fashion blog. She's an influencer, a typical shopper, and on every visit to the store she is guaranteed to leave with at least 5 bags.

Violet is always connected with her friends, without fail, on her mobile device. She enjoys twitter, and regularly makes updates to her fashion blog. She also subscribes to multiple fashion websites for outfit ideas, and enjoys sharing outfit ideas with friends.

She also has a laptop, which she uses extensively for school work but also for social media. She finds the Eaton Centre's close proximity to McGill ideal for her outfit needs, and hopes to leverage the most out of her shopping experience.

Store and Item
Knowledge:

10/10

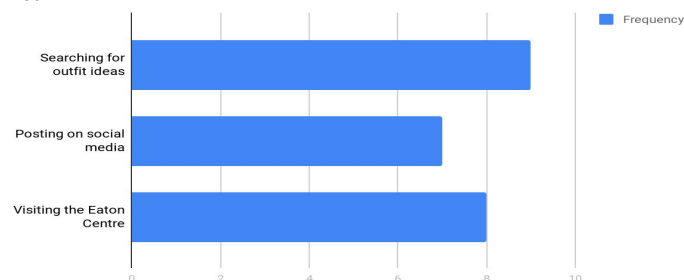
Communication:

8/10

Fashion choice:

10/10

Typical Activities



Drivers	Goals	Pain Points
<ul style="list-style-type: none">Enjoys fashion extensivelyEnergized by shoppingExtremely social, interacts with retail agents at stores	<ul style="list-style-type: none">Wants to continue having a great experience at the Eaton CentreWants to find better, more tailored products that match her shopping needs	<ul style="list-style-type: none">Ignores push notifications on her phone thinking it's spamVery selective about her choice of store

¹ Pexels (2019)

<https://www.pexels.com/photo/woman-holding-two-white-and-beige-shopping-paper-bags-in-building-974911/>

Persona #2: (Written by Carl El Khoury)



Food and Diet
Knowledge

10/10

Selectiveness:

9/10

Sportiness:

9/10

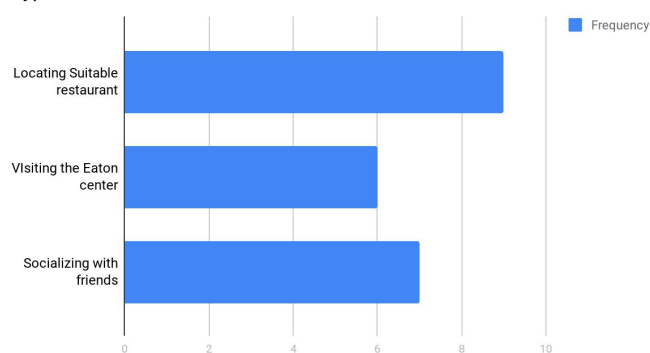
[Athlete]

²**Valentin Nolland** / A McGill University Undergraduate that strives to be a professional athlete

Valentin is a McGill University student that was born in France. He is an engineering student that dedicates all of his free time studying or playing sports. He is passionate about fitness and exercising and hopes to compete in the Olympic Games in the future. He is not the atypical customer at the Eaton Centre as he only comes to the Centre to eat with his friends.

Valentin has a very strict diet and chooses his meals very carefully as to not affect his fitness and endurance. He does not drink any alcoholic beverages and refrains from eating any type of junk food. Valentin is a member of multiple sporting clubs and always likes to participate in new activities with his friends. He spends a lot of time on his laptop, completing his assignments, and has developed a habit of rarely checking his phone. He does not read his phone notifications unless they are from his fitness tracking applications.

Typical Activities



Drivers	Goals	Pain points
Enjoys sports and physical activities	Wants to have a good time with friends at bars and restaurants	Doesn't check his phone very often and can disable notifications
Eating healthy	Always looking for the healthiest type of food at the Eaton Centre	Avoids highly expensive lifestyles
Likes to compete with other athletes		

² GoToStudy Blog (2019) <http://www.gotostudy.com/blog/651-what-is-gotostudy-all-about>

Persona #3: (Written by Elie Elia)



³[Retail Salesperson]

Mary Smith / wishes to ensure customer satisfaction and gain commissions on sales

“Encouraging my customers to use the Eaton Centre’s Loyalty Program will hopefully earn me more commissions and discounts for personal shopping and covering school expenses”

Store and Item
Knowledge:

10/10

Communication:

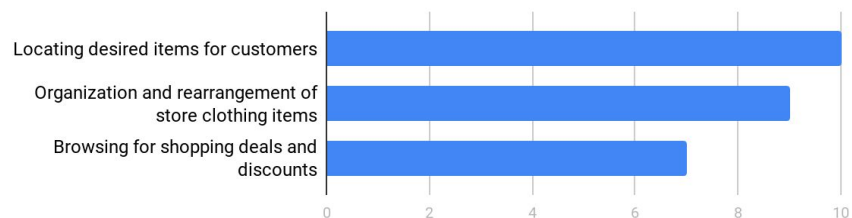
9/10

Work Experience:

7/10

Typical Activities

■ Frequency



Mary is from Montreal, Canada and works as a retail saleswoman at Levi’s in the Eaton Centre. She is a full-time student at McGill University but has part-time shifts at the store. Mary has been working at Levi’s for one year now, but has previously worked several retail jobs at various other stores. She is extremely passionate about her job, as she loves finding the right clothing for her customers.

Mary is familiar with the use of electronic devices in mobile environments as she always remains connected to her friends through social media and utilizes them for finding shopping deals online. She also uses her laptop and smartphone to complete her schoolwork, where her primary form of remaining up-to-date on her deadlines is through push notifications from her university’s course system.

Drivers	Goals	Pain Points
Wants to continue earning commissions on sales to get more money.	Encourage customers to return to the Eaton Centre and hopefully to the store at which she works.	Repetitive promotion of loyalty program benefits which may annoy her customers.
Enjoys finding the right clothing for her customers.	Ensure that all customers have a great shopping experience at the store as it affects the Eaton Centre’s reputation.	Additional work to her current tasks by having to use the loyalty program system and promote it to customers.
Meets new people and makes friends.		

³ Hiring Monster (2019)

<https://hiring.monster.com/employer-resources/wp-content/uploads/sites/2/2019/02/45411e9b578810641a18d6ee347cee58.jpg>

Persona #4: (Written by Ragheed Qasmieh)



⁴[Restaurant Chef]

Katsu Lee / *wish to ensure customer satisfaction and hence increase their loyalty to come back to the Centre.*

“Food quality comes first.”

Work Experience:

9/10

Technical
Knowledge:

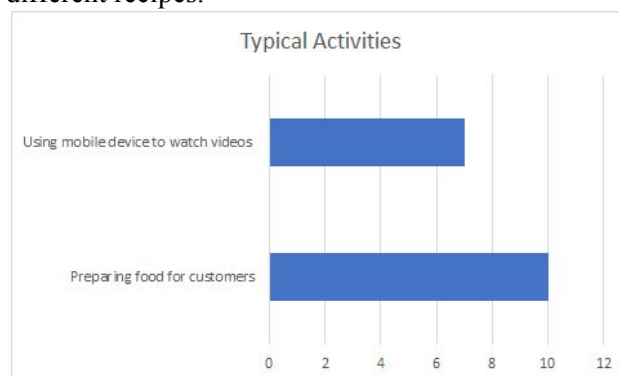
7/10

Hospitality:

9/10

Katsu is from Tokyo, Japan, and has come to Montreal to work at Japanese Restaurants. He currently works as a chef at Edo Japon in the Eaton Centre. He studied culinary arts at the University of Tokyo and he uses his knowledge in cooking techniques to try to serve customers the most delicious Japanese meals. Katsu is very passionate about his job and wants to be one of the most famous chefs in Montreal.

Katsu is knowledgeable in the use of mobile devices as he is subscribed to many food preparation Youtube channels and frequently watches videos to learn about different food cultures as well as expand his scope of experience by implementing new recipes. He also has his own channel where he regularly uploads videos to teach viewers about the preparation methods of his different recipes.



Drivers	Goals	Pain Points
<ul style="list-style-type: none">Wants to continuously improve his culinary skills.Ensure the satisfaction of customers by preparing exquisitely different meals than those prepared at regular restaurants.	<ul style="list-style-type: none">Encourage customers to regularly return to the Centre to dine at Edo Japon.Improve his reputation as a chef.Recommendation by his customers.	<ul style="list-style-type: none">Barely have time to use the application during work hours.Sometimes have to work on the cash too so it is too much of a stress for him.

⁴ Deposit Photos (2019) <https://florestaurant.com/wp-content/uploads/2016/07/about-1.jpg>

Persona #5: (Written by Patrick Ghazal)



Work Experience:

8/10

Technical
Knowledge:

9/10

Determination:

9/10

⁵[Administrative Employee]

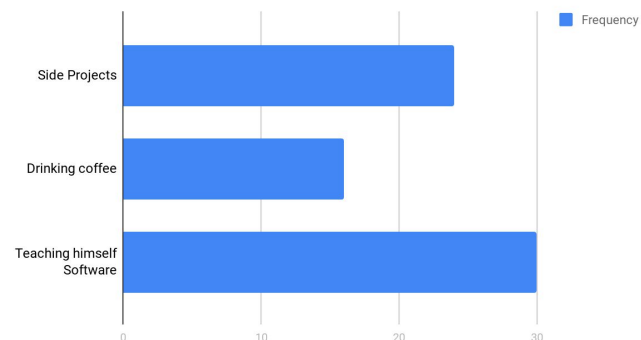
James Adams / a junior employee with a lot to prove

"Choose a job you love, and you will never work a day in your life."

James is a junior employee at the MECD. At 27, he is on track to rise to an executive position by age 35. He is hard-working and resilient, which earns him the respect of his colleagues. A computer enthusiast since childhood, he works in the software department of the MECD, gathering and analyzing data from the various monitoring and payment systems around the Eaton Centre.

James was part of the team that first suggested the implementation of a Centre-wide loyalty program. As such, he feels a certain responsibility towards it and will do anything to make sure the project succeeds.

Typical Activities



Drivers	Goals	Pain Points
Wants to prove his worth through hard-work and determination	Obtain promotions within the MECD Save money for future travels	Sometimes focuses too much on work, causing his personal life to suffer Considers himself addicted to technology

⁵ Deposit Photos (2019)
<https://depositphotos.com/20030237/stock-photo-cheerful-young-man-over-white.html>

Persona #6: (Written by Anas Shahid)



Store and Item
Knowledge:

10/10

Communication:

9/10

Work Experience:

7/10

⁶[Shopper]

Arthur Shelby / *looks out for the best clothes*

Arthur has come from the UK to start a company here in Montreal, he is currently the founder and CEO of a well-known consultancy firm called the Peaky Blinders Co. He is really passionate about his work and continues to think of ways to expand his business. He also is very considerate about his dressing sense and that's why during the evening, when he is done from work. He comes to the store and shop for new clothes every other day. He visits MECD very often because the mall has all the relevant stores to his liking such as Gucci and Tom Ford. He also loves to dine at the Central Perk Cafe, exists in MECD, that has the best coffee in Montreal

Arthur is a very social person, and is engaged a lot on his phone. He loves to upload pictures of his new suits on Instagram and show-off his brand new Gucci pairs every time he buys one.

Arthur also has his laptop, which he strictly uses for browsing content either for his work or looks out for new designs of suits on the internet.

Typical Activities

■ Frequency



Drivers	Goals	Pain Points
Wants to continue wearing new clothes and suits to stay up-to-date with current fashion style . Ensures he gets the daily dose of black coffee.	Ensures to find the best suit that would accurately represent his brand and also suits him perfectly well. Drink the best coffee to relax after work.	After a long day of work, there is a very long queue for coffee which irritates Arthur. Finding a perfectly tailored suit but does not fit Arthur properly.

⁶Instagram

<https://www.instagram.com/p/B2SM4bAj6yN/?igshid=er9hpggl2znv>

Persona #7: (Written by Christopher Boustros)



⁷ Shane McDonald

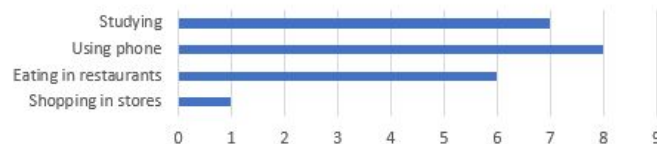
A Concordia University student who only eats fast food.

Shane is a computer engineering student at Concordia University. He lives alone and does not know how to cook; he also does not like to shop for groceries, so he prefers to eat fast food every day. He chooses from a wide variety of restaurants and never eats the same thing two days in a row. Since he lives near the Eaton Centre, this is where he primarily eats. He stays at the mall for an average of 30 minutes and rarely visits the stores.

He communicates with friends and family frequently through social media, such as WhatsApp and Facebook. He spends a great deal of time on his phone to check for notifications, respond to emails and messages, and to share pictures of the meals he orders.

He has a laptop, phone, and tablet which he uses to study, play games, and watch movies and TV series. His fashion style is sub-par, and he frequently wears the same style of clothing.

Typical Activities



Drivers	Goals	Pain Points
<ul style="list-style-type: none">Views all push notificationsLoves to eat in restaurantsGreat with using phones and other technology	<ul style="list-style-type: none">Wants to try all of the restaurants in the Eaton Centre to discover his favoritesTries to minimize time waiting in line at fast-food restaurants	<ul style="list-style-type: none">Does not shopStays in the mall for a short amount of time

⁷ Shutterstock (2019)

<https://www.shutterstock.com/es/image-photo/man-eating-restaurant-enjoying-delicious-food-5252459>