e-Soldes Mobile Application
Capstone Design
May 2016
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Spring 2016
e-Soldes Mobile Application

Capstone Final Report

Approved by the Supervisor

Pr. Hanaa TALEI

[Signature]
ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to all those who contributed in the completion of both this report and my capstone project. To start with, a very special gratitude goes to my supervisor Pr. Hanaa TALEI whose contribution in stimulating suggestions and encouragement helped me to coordinate my project and write this report. I would like to show her my gratitude also for dedicating me her time and effort. I would also thank all the SSE especially Pr. Yassine Salih Alj, the capstone coordinator, for all what he has been doing. Him organizing the capstone activities and setting the deadlines made me work even harder and motivated me to meet all the deadlines. I also want to extend my gratitude to all the parties that have supported me through the realization of this project including all the tutorials I have been watching and that made the implementation and design phases much easier. The following website: www.stackoverfolw.com [4] was very helpful as it provided me with the necessary assistance to surmount any technical obstacle and avoid errors and bugs.
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ABSTRACT

The world of shopping is in need of an active daily application, a mobile application that offers an opportunity to its users to win some shopping credits. In fact, this special mobile application, named e-Soldes, is a great opportunity for people to benefit from different percentage of sales in their desired brands. Given that this kind of application is currently not available in Morocco and the idea itself is not common anywhere (not existing in the market), my mission is to ensure the implementation and the proper functioning of this mobile application. Basically, the main objective of my project is to come up with a great and innovative idea that will create an added-value to its users through providing them with several benefits. The following report will address all the different details that can be directly or indirectly related to the implementation of this application.
1. INTRODUCTION

1.1. Project Description

Morocco is seeking modernity and innovation through the use of advanced technologies in almost all fields. Indeed, the use of the latest technologies in daily life involves the implication of the automated systems and the smart applications that offer great support and services to its users. In the world of shopping and malls, there is a colossal need of a mobile application that offers deals and privileges to its consumers.

It is very obvious that people are more encouraged to shop during sales period whether from a big or a small franchise, people all around the world tend to be very attracted when it comes to discounts, sales, and special deals. However, those offers are only available twice or three times per year at most. Our mobile application gives a new opportunity to encourage customers to buy from their favorite franchise with small discounts after answering few questions about the franchise.

More importantly, this mobile application, available anytime everywhere, is a great opportunity for Moroccans not only to use the latest technologies and being connected but also to benefit from the variety of deals offered by this mobile app. Therefore, we came up with the idea of building a mobile application that gives a solution to this matter.

In this context, one may wonder about the benefit of this application on those companies offering the deals and discounts. The answer is simply marketing or more precisely “e-marketing”. E-Marketing is defined to be the application of marketing principles, methods and techniques via electronic media and more specifically the Internet (Cambridge Online Dictionary). Companies spend thousands of dollars annually for e-marketing to be first known and second well positioned in the market.
This report will present our long semester journey in developing such an application that would be both beneficial for shopping franchises and their customers. This report will contain detailed information about each phase of the life cycle of our piece of software.

In this report, we will start by introducing the general overview of the mobile application that presents the general idea behind this project along with the detailed information concerning its method of work. Then, we will present the feasibility study along with the STEEPLE (Social, Technical, Economic, Environmental, Political, Legal, and Ethical) analysis of the project in order to explain how feasible it is and why would it be important and beneficial to use. Afterwards, another section will take care of the design and the implementation of the mobile application, this last section will discuss the technical part of the project.

1.2. Problem & Objectives

The main problematic of this application is actually derived from the fact that almost all people interested in fashion world postpone their shopping transactions to sales periods (New Year’s summers …). Therefore, we came up with the idea of having a new mobile application that offers deals and sales to its users all over the year.

This problematic can be addressed by building a mobile application that anyone can upload in his phone through the store’s phone. The user, after login in, can take an easy quiz and gain a percent of sales proportional to the score obtained on the quiz.

Mainly, the purpose of this project is to create a mobile application that will be used to allow its users to take advantage from additional sales in their desired brand stores. Since the goal of any application is to solve an existing problem and allow the user to use the latest ICTs, my application e-Soldes, will be a mobile app that operates with the goal of offering an opportunity to its users to take advantage from a wide variety of deals in different stores.
Given that online shopping increased recently, e-Soldes will prove that a demand exists in this field especially that users will gain additional benefit from this app. Given that the market is lacking such applications, e-Soldes will be the first and only application that offers to its users an additional value during their shopping transactions.

Actually, the main added values of this application are derived from its main characteristics, mobility and broad reach. Those added values include the ubiquity, which refers to the fact that the application is available and ready to be used anywhere anytime, convenience and instant responsiveness. Having stated these benefits, one other major objective of my project is to turn this application into a popular one, and this is not very difficult to achieve especially due to the following factors:

1- Widespread availability of mobile devices
2- Phones becoming easily affordable
3- The “Cell phone culture”

e-Soldes has to be hosted in Google App Engine and run across several servers. Google App Engine is a platform as a service cloud computing platform for developing and hosting web applications in Google managed data centers. Applications are sandboxed and run across multiple servers. App Engine also offers automatic scaling for web applications.

1.3. Description of the mobile application’s features

In this particular section, a clear description of the different features that will be ready to use in the mobile application of this capstone project. First of all, when someone download the mobile app on his or her device, the guest will be automatically directed to the main page, that is the login and sign up page. E-Soldes will ask the user to enter his credentials or create a new account through the sign up feature.
2. REQUIREMENT ENGINEERING AND BUSINESS MODEL

2.1. Requirement Engineering Specification

When developing a software or an application, a sequence of steps has to be always followed in order to complete a set of tasks. These multiple steps are known as the software engineering process or life cycle because they mainly describe the life of a software product. Starting from an ambiguous concept of system requirements to its implementation and further use. Software life cycle models are diverse and different, yet the one used here is the waterfall model.

According to the IEEE standard glossary of software engineering, Software requirements are defined as being: (1) a condition or capability required by a user to solve a problem or achieve an objective; (2) a condition or capability that must be met or possessed by a system or system components to satisfy a contract, standard, specification, or other formally imposed document (IEEE).

![Figure 1 - Relationship of several components of software requirements](image-url)
Business requirements are considered high-level requests from users to the developed system. Stakeholders might define the business requirements for a software product as a tool or a way that will help the company operate more efficiently or compete successfully in the marketplace. In our case, e-Soldes will be beneficial for both users and franchises (Business Model).

All user requirements must be in line with business requirements. User requirements constitute a set of tasks that the user should be able to perform while interacting with the system. For e-Soldes, the users will be able to take the quizzes and win the appropriate discount.

Functional requirements designate the interaction between the system and its environment. In fact, they are statements of services that the system should provide, how the system should react to particular inputs and how the system should behave in particular situations. In our mobile application, quizzes have only one solution and discounts are offered only when the score is eligible.

Non-functional requirements describe constraints on the services or functions offered by the system such as timing constraints, constraints on the development process, standards, etc. Besides, they are requirements characterizing a system property such as expected performance, robustness, usability, maintainability, etc. An example in e-Soldes would be reliability and privacy because user’s data are secured.

One can say that non-functional requirements place some constraints on how functional requirements should be achieved. Constraints can be defined as the restrictions that are placed on the choices available to the developer for the design and implementation of a software product.
2.2. Business Model

The benefit would be for both the shopping centers, malls, franchises and for the customer as well. The idea here consists of knowing some information about your favorite brand to be able to answer a small quiz that consists of few questions about the history, the method of work, and the different departments of the franchise. The user score on this small quiz will define the discount percentage that will be received by e-mail and will last for few weeks.

This application would encourage shoppers to buy more in order to be able to use their discounts. For the franchise, this is a free promotion to their products called the “Marketing Discount Pricing Strategy”. In this context, this strategy will help the franchise to get more customers and thus generate more profit.

More specifically, when the user becomes a registered user and enter a valid credentials, he or she will be directed to the main activity of selecting the appropriate brand. Once the user clicks on the brand, he or she will be asked to answer 7 different questions in a total period of 70 Seconds (10 sec for each question). According to the user’s score, e-Soldes gives the appropriate reward or discount to the user. However, the mobile application stops the user, for 24 hours, from taking another questionnaire on the same brand.

2.3. Use Case Model

Use-case models are mainly used to represent each interaction with the system. In fact, a use-case model shows the system features as ellipses and the interacting entity as a stick figure. For e-Soldes, the cases (e-Soldes actions that provide measurable value) are shown with the actors (users of the mobile application).
Flow of Events of different use cases

**Take brand Quiz**

<table>
<thead>
<tr>
<th>Use Case Name</th>
<th>Take brand Quiz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Case ID</td>
<td>01</td>
</tr>
<tr>
<td>Description</td>
<td>The Registered User chooses to take a quiz of a brand.</td>
</tr>
<tr>
<td>Actors involved</td>
<td>Registered User</td>
</tr>
<tr>
<td>Pre-conditions</td>
<td>Registered User must be logged in</td>
</tr>
<tr>
<td>Main Flow</td>
<td>1- The Registered User clicks on the button wanted</td>
</tr>
<tr>
<td></td>
<td>2- The Registered User takes the quiz</td>
</tr>
</tbody>
</table>
### Modify Profile

<table>
<thead>
<tr>
<th>Use Case Name</th>
<th>Modify profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Case ID</td>
<td>02</td>
</tr>
<tr>
<td>Description</td>
<td>The Registered User chooses to modify the profile</td>
</tr>
<tr>
<td>Actors involved</td>
<td>Registered User</td>
</tr>
<tr>
<td>Pre-conditions</td>
<td>Registered User must be logged in</td>
</tr>
<tr>
<td>Main Flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1- The Registered User clicks on Modify Profile</td>
</tr>
<tr>
<td></td>
<td>2- The registered User changes the password.</td>
</tr>
<tr>
<td></td>
<td>3- The Registered User clicks on Confirm</td>
</tr>
<tr>
<td>Post-conditions</td>
<td>Once the Registered User is done with modifying the profile (changing the password), he/ she will be redirected to the main page or error message.</td>
</tr>
</tbody>
</table>

### Register

<table>
<thead>
<tr>
<th>Use Case Name</th>
<th>Register</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Case ID</td>
<td>03</td>
</tr>
<tr>
<td>Description</td>
<td>The Registered User chooses to</td>
</tr>
<tr>
<td>Actors involved</td>
<td>Registered User</td>
</tr>
<tr>
<td>Pre-conditions</td>
<td>The mobile App is idle</td>
</tr>
</tbody>
</table>
| **Main Flow** | 1. The client hits the button *Sign In*  
2. The client enters his username, password and email.  
3. The system adds the user to the list of registered users. |
| **Post-conditions** | The user confirms his account and becomes a registered user. |

**Log in**

| **Use Case Name** | Log in |
| **Use Case ID** | 04 |
| **Description** | The Registered User logs in order to access the specific activities of the system. |
| **Actors involved** | Registered User |
| **Pre-conditions** | The system is idle. |
| **Main Flow** | 1- The Registered User hits the button Log in  
2- The Registered User enter the username and password  
3- The system validates of the username and password  
4- If valid, the system displays the different activities |
| **Post-conditions** | Once logged in, the user can choose to perform any of the activities available. |
## Log out

<table>
<thead>
<tr>
<th>Use Case Name</th>
<th>Log out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Case ID</td>
<td>05</td>
</tr>
<tr>
<td>Description</td>
<td>It logs the Registered User out of the application</td>
</tr>
<tr>
<td>Actors involved</td>
<td>Registered User</td>
</tr>
<tr>
<td>Pre-conditions</td>
<td>The Registered User is logged onto the system.</td>
</tr>
</tbody>
</table>
| Main Flow         | 1- The Registered User clicks on Log out Button  
|                   | 2- The Registered User confirms the logging out  
|                   | 3- The Actor’s session is closed               |
| Post-conditions   | Once the Registered User confirms the logging out from the system, he/she is taken to the main system. |

## Win % of sale

<table>
<thead>
<tr>
<th>Use Case Name</th>
<th>Win % of sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Case ID</td>
<td>06</td>
</tr>
<tr>
<td>Description</td>
<td>The Registered User wins a specific percentage of the sale</td>
</tr>
<tr>
<td>Actors involved</td>
<td>Registered User</td>
</tr>
<tr>
<td>Pre-conditions</td>
<td>The Registered User should get a minimum score</td>
</tr>
<tr>
<td>Main Flow</td>
<td>An activity (showing the right percentage of sale) will be displayed</td>
</tr>
<tr>
<td>Post-conditions</td>
<td>Right percentage of sale won</td>
</tr>
</tbody>
</table>
3. FEASIBILITY STUDY AND STEEPLE ANALYSIS

Technically, if we were to compare the usage rate of mobile applications to web-based ones, we will notice that the mobile application usage is increasingly higher, that is why I opted for it. In fact, the implementation of this application will be used by Android Studio which is an official IDE for Android application development. It is a java-based platform. Together with Genymotion which is the best Android Emulator for app testing and presentation. This mobile App creator will offer a good design, quick and easy use which is compatible with working functionalities and requirements of e-Soldes. By the end of the implementation, the mobile app will be hosted in Google App Engine.

3.1 Development Methodology

First of all, there are several ways that can be adopted during the realization of this project. Deciding which way or tools to use in order to achieve my project’s goals on time was a challenge. In this project, we opt for the waterfall model which is a linear sequential design process that is characterized by the fact of not going back to the previous phase when it is done. The challenge can as well be illustrated not only in the difficulties encountered during the implementation phase but also in the time constraints faced during the semester. After a weekly basis meetings with my supervisor, I had all the guidance and assistance to start working on my mobile application.

All the requirements should meet their deadlines with no delays to ensure a proper evolution of the capstone project. Finally, as I have now all the tools to start answering all the requirements of the mobile application, I can surely use this platform and start testing my code step by step.
3.2 Installation and Configuration

To start this capstone project, I decided to use the Android Studio platform to implement my mobile application. Since I had no background in mobile application development and implementation, I had to rely on watching some online tutorials and documentation to better understand the basics of this platform \(^1\). Those tutorials were very helpful in both helping me to develop my programming skills and my auto learning abilities \(^4\).

Moreover, I had to install Genymotion which is the best Android Emulator for app testing and presentation. Then, I had to configure Genymotion using a virtual box so it can be used as the official emulator for Android Studio \(^2\).

3.3 STEEPLE Analysis

STEEPLE analysis in fact gives us an overview about the entire situation our project might be in. Precisely, it is similar to a bird’s view of the stimulus as well as the scenarios that surround the mobile application.

STEEPLE is actually an acronym in which each letter denotes certain factors for the study. (Social, Technical, Economic, Environmental, Political, Legal, and Ethical). All these factors affect the market in different ways and have influence upon the nature of the project we are in. The seven following small sections will explain the impact and position of this application on the social, technical, economic, environmental, political, legal, and ethical side:

3.3.1. Social Impact

E-Soldes is in fact a pre-shopping mobile application. Socially, e-Soldes has to offer deals to rapidly match the changing consumer behavior and preferences in shopping. Due to the fact that shopping is easily influenced by lifestyle’s consumers, e-Soldes should include only brands that follow the Moroccan trend accordingly.
This application may as well affect customer’s lifestyle and fashion. In other words, this application will encourage people to answer a quiz before shopping in order to get a discount, a thing that is quite new as a shopping style.

The Brands positioned on the application may also affect customers and more precisely application users with their new fashions and style.

3.3.2. Technical Impact

First in its industry, e-Soldes has and will have the leading position in this field. In other words, e-Soldes will be the first and only one offering the best deals to its users. Besides, the mobile application will be available and downloadable in the latest technologies.

More than that, this will be an added features and new idea implemented in mobile technology field in Morocco. Shoppers will be more encouraged to install the application and thus discover and use mobile application technology.

3.3.3. Economic Impact

Although the ongoing global economic crisis and the reduced purchasing power of consumers, e-Soldes will not only be operating ordinarily but will be offering growth to different brands. The mobile application is also privileging shoppers to buy more items at a reduced price.

Therefore, e-Soldes, will first help in raising the economic growth of the country by creating a plus in the “sell and buy” activity. Besides, it will also contribute in raising the customer confidence towards both the mobile technology and their favorite brands.

3.3.4. Environmental Impact

Frankly, all projects have an impact on their environment. Some have a negative influence whereas others have a positive effect.

Since e-Soldes is operating on a mobile platform, it will have neither a direct nor an indirect interaction with the environmental factors.
3.3.5. Political Impact

Today, each single country has its own political restrictions and those restrictions are either favoring or disadvantaging the operations of the business. Morocco, politically stable, does not involve the business of shopping into the world of politics. Indeed, we can say that e-Soldes with its functionalities will not have an impact on Moroccan political system.

In this same political regard, the governments along with its organizations mainly have a positive attitude towards technology and mobile applications.

3.3.6. Legal Impact

So far, there are no constraints in building mobile applications. In fact, the only laws concerning mobile applications are the one concerning the purpose of technology created should not be harmful in anyways. Legally, e-Soldes will have legal contracts with all brands that are willing to offer deals to the public.

E-solde is legally a safe application that will not publish its users’ personal information and will not ask for any private ones. When installing the application on a mobile platform, this later don’t ask for any access to private information such as photos, contacts, or messages.

3.3.7. Ethical Impact

From an ethical perspective, the mobile application should be transparent and not favoring a particular customer.

E-Soldes will make sure that all customers will be given the discount only depending on the score of their quiz. In other words, e-Soldes will work harder to guarantee a trustworthy image and reputation. This means that the results generated by the mobile application will certainly ensure what was answered.
4. APPLICATION DESIGN

After having addressed both the feasibility and analysis parts, another important phase has to be completed. It actually focuses on the design which is really essential as it helps get the general structure defining the system. This phase will incorporate three separate levels of design including the Low level, which refers to the way the mobile application modules are related to each other, the interface level, which refers to the way the mobile application will communicate with the users, and the third one, data level, which points out the way the data is going to be stored and managed in regards to the application. In order to facilitate the implementation process, these three levels should be taken into consideration.

4.1. Application Architecture

Two-Tier Client-Server Architecture: e-Soldes Mobile App

![Figure 3 - e-Soldes Architecture](image_url)
Using Android, there are many solutions to persist data between users’ sessions. One common solution is to use a relational database to persist data and then to be enable to query it easily. In standard, Android SDK comes with a SQLite implementation [5].

All classes that need to manage databases in Android SDK are contained in the package android.database. Specifically, the package android.database.sqlite contains the SQLite specific classes. In brief, SQLite API is centered on 2 main classes:

- SQLiteOpenHelper that is a helper class to extend to manage database operations. SQLiteOpenHelper is extended in Android and overrides the following methods (onCreate(), onUpgrade()) and allow accessing the database through getReadableDatabase() and getWriteableDatabase() [5].

- SQLiteDatabase that is the base class for working with a SQLite database in Android. SQLiteDatabase is the class used to communicate with a SQLite database. It exposes several methods to interact with database like insert(), update() or delete() [5].

4.2. Data Model

The ERD or the entity-relationship diagram is a visual representation that shows the different relationships of entity sets in a database. In other terms, it is meant to clarify the logic behind the structure of a database. It is used by businesses as a data modeling technique that helps them map their processes and creates a strong relational database for them. Actually, the ERD helps up better visualize how the data is shared between the database entities. Below is the ERD of e-Soldes mobile application which shows the different relationships between the entities.
Each quiz has an ID, brand associated to it, date, and a number of questions. Each quiz provides a specific percentage of sales. Each quiz is a number of questions. The registered user gets a discount depending on the score obtained. Its score gets incremented whenever he or she chooses the right answer.
5. IMPLEMENTATION & DESIGN

5.1. Screenshots

**Login / Sign up Activity**

The first activity is the login / Register page:

- The user can login by imputing his or her credentials.
- The guests can register by clicking on the Sign up button to become an e-Soldes member.

*Figure 5 - Login and Sign up Activity (username: imad and password: imad)*
If the user credentials are wrong, a message is displayed to the user saying “Invalid Login”.

Figure 6 - Invalid Login Message
Sign up Activity

- The user can sign up by imputing all the required fields in the Sign up activity.

*Figure 7 - Sign up Activity*
Following this activity, two main results can be displayed to the user:

1. Data inserted correctly and the user can start logging in.

*Figure 8 - Data Inserted Message*
2. Missing information if one of the text fields is let empty.

Figure 9 - Missing Information Message
3. If the Inputted Passwords and the confirmation password are different.

**Figure 10 - Passwords do not match Message**
• The second activity, after login in, the user can view the available brands and choose the desired brand by clicking on its logo to take a quiz and be rewarded after.

• The user can also scroll down and up to view all the brands in the mobile App.

*Figure 11 - Brands Activity*
The user have an additional feature that allows the user to modify the profile (i.e. change the password)

Figure 12 - Modify Profile Activity
The third main activity, after choosing the wanted brand:

- A 7 questions quiz is popped-up chronologically.
- Each question is worth 1 points and allowed to be answered in 10 seconds.
- A question not answered is a wrong question, thus it worth 0 points.

*Figure 13 - H&M Quiz Activity*
When the registered user chooses an answer, this latter turns green.

Figure 14 - User interacting during the Quiz Activity
Once the 10 seconds are over, the user can no more click on answers, instead the right answer is shown in blue.

*Figure 15 - Right Answer during the Quiz Activity*
Once the 7 questions quiz is complete, the score obtained is displayed.

![Figure 16 - Score Obtained Activity (Loosing Case)](image)
If the score obtained is strictly less than 5, the user gets a message that indicates that he or she fails the test and no rewards are given to the registered user.

*Figure 17 - Loosing Activity*
If the score is equal to 5 or higher, the registered user is rewarded by a specific percentage of sales.

*Figure 18 - Score Obtained Activity (Winning Case)*
If the score is equal to \(\frac{5}{7}\) \(\Rightarrow\) 5\% discount.

If the score is equal to \(\frac{6}{7}\) \(\Rightarrow\) 10\% discount.

If the score is equal to \(\frac{7}{7}\) \(\Rightarrow\) 15\% discount.

*Discount Valid for 2 weeks in all ZARA Stores*
Figure 20: Winning Activity (10%)

You Win!!

10% Discount * H&M
Code: MNQ0275

* Discount Valid for 2 weeks in all H&M Stores

Figure 21: Winning Activity (15%)

You Win!!

15% Discount * Celio
Code: WTX7627

* Discount Valid for 2 weeks in all Celio Stores
After completing the quiz, and no matter what score the registered user gets, taking another quiz on the same brand is not authorized in the next 24 hours.

Figure 22: Condition Message
Upon creating an account, the user will receive an email confirming that the account was successfully created.

Figure 23: Registration Email Notification

The email previously received will provide the user with the necessary content, such as username and password.

Figure 24: Registration Email Content
Once the user takes the quiz and succeeds in achieving a score of 5/7 or above, an email is sent notifying him or her of the voucher.

The latter consists of the following information: the name of the winner, the discount percentage on the voucher, the code of the voucher, the brand, and the validity date of the voucher.

Figure 25: Promo Voucher Email Notification

Figure 26: Promo Voucher Email Content
6. TESTING

The testing phase in the most important phase of the cycle of creating an application. Indeed, it allows us to decide if the application functionalities are properly working or not. In other words, testing is the process of examining an application to ensure it fulfills the requirements for which it was designed and meets quality expectations. More importantly, testing ensures the application meets customer expectations.

Testing a mobile application or any kind of applications is equivalent to saying that the application has no errors and no bugs. In this context, it is obvious to say that the testing phase gave me a clear idea about what I achieved compared with what I set as an objective the first day.

In my capstone implementation, I had to reuse some existing code (An example would be the code that put the restriction of 24 hours from www.stackoverflow.com) [3]. So, I had to compile and run every time to check whether the source code added is compatible (i.e. not creating any errors or bugs) with the source code already existing and working perfectly. To put it frankly, I went all over the testing process starting by the unit testing which mainly testing of individual program components. Then, I moved to integration testing where program units are combined and tested as groups in multiple ways. Finally, system testing that requires testing the entire system behavior as a whole, with respect to several scenarios, special cases, and requirements.
7. FUTURE WORK

The main functionalities of e-Soldes are already implemented, but other features are still to be added to the application. In fact, the main function that still needs to be updated in this mobile application is sending an email with a pdf file attached to the registered user account. So far, the email is sent but without the attached file. This pdf file actually confirms that the user has won a certain percentage of sales in a particular brand. The file attached will contain the name of the winner, the name of the brand, the discount offered, the signature of the mobile application, the validity date, and a barcode that can be scanned by the vendor present in the store to confirm the discount.

The mobile application will also be committed to release new versions of e-Soldes where more brands are added to the list of brands. The latter indeed involves the brand’s approval to be part of e-Soldes activities. Moreover, new questions will be inserted in the questions’ databases to avoid privileging old users. In this scenario, the server manages most processes and stores all data (questions about the brand). The client requests specific data or processes. The server relays process output to the client. Clients sometimes handle processing, but require server data resources for completion.

Another important aspect that should be increased in e-Soldes is the level of security. In fact, in order to ensure full integrity, authenticity and reliability, the mobile application has to adopt the latest technologies in the field of software security.
8. CONCLUSION

This report presents the different capstone phases I went through during the process of creating this application, starting by the feasibility study to end up by the code and implementation. To recapitulate, the idea behind this project was to develop the shopping habits in Morocco, and thus to fulfill both customers and brands’ needs.

In this context, the customer will benefit from getting a discount from a favorite brand while the franchise will have a free online marketing based on the discount pricing marketing strategy.

This project – mobile application - will not only allow brands to make more profits by selling more items and getting free online marketing, but it also offers a variety of deals and sales to shoppers. In other words, this transparent mobile application will make a positive impact on the state of shopping in Morocco in the future.

I strongly believe that e-Soldes will be a rich, engaging and life-changing mobile app thanks to the offers it provides. Besides, I can absolutely say that the implication of this mobile app will not oppose any of the STEEPLE aspects but rather will encourage people to inquire more information about preferred shopping brands. In brief, I can say that this mobile app is feasible and efficient given the current circumstances.
9. REFERENCES


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