

PROCESS REPORT

LARP EVENT SOFTWARE SOLUTION



Version 3.0

GROUP 34

Dholon Akter | Nr. 3047040

Chanelle Hart | Nr. 3323781

Talia Santos | Nr. 3294579

Thanh Hoàng | Nr. 3353362

# Version History

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Version #** | **Implemented By** | **Revision Date** | **Approved By** | **Approval Date** | **Reason** |
| 1.0 | T. Hoàng | 12th Feb | - | - | Layout of document  First meeting information |
| 1.1 | C. Hart | 9th Mar | - | - | Modifications  Update |
| 2.0 | T. Hoàng | 16th Mar | - | - | Update t/m Week 4 |
| 2.1 | T. Hoàng | 24th Mar | - | - | Update t/m Week 5 |
| 2.5 | C. Hart | 19th Apr | - | - | Update t/m Week 9  Partially Week 10 |
| 3.0 | T. Santos | 24th Jun | - | - | Week 11-20 |

Table of Contents

[Version History 2](#_Toc508979763)

[Week 1.5 5](#_Toc508979764)

[Meeting #0.5 5](#_Toc508979765)

[Task Delegation 5](#_Toc508979766)

[Week 2 6](#_Toc508979767)

[Meeting #2.0 6](#_Toc508979768)

[Week 3 8](#_Toc508979769)

[Meeting #3.0 8](#_Toc508979770)

[Meeting #3.5 9](#_Toc508979771)

[Week 4 11](#_Toc508979772)

[Meeting #3.5 11](#_Toc508979773)

[Task Delegation 11](#_Toc508979774)

[Mark justification 12](#_Toc508979775)

[Individual Reflection 13](file:///C:\Program%20Files\Git\ProPGroup34\ProcessReportV1.1.docx#_Toc508979776)

[Dholon Akter 14](#_Toc508979777)

[SWOT Analysis 14](#_Toc508979778)

[Learning moments 14](#_Toc508979779)

[Self-evaluation of spent effort 14](#_Toc508979780)

[Improvements for next project 14](#_Toc508979781)

[Chanelle Hart 15](#_Toc508979782)

[SWOT Analysis 15](#_Toc508979783)

[Learning moments 15](#_Toc508979784)

[Evaluation of spent effort 15](#_Toc508979785)

[Improvements for next project 15](#_Toc508979786)

[Talia Santos 16](#_Toc508979787)

[SWOT Analysis 16](#_Toc508979788)

[Learning moments 16](#_Toc508979789)

[Self-evaluation of spent effort 16](#_Toc508979790)

[Improvements for next project 16](#_Toc508979791)

[Thanh Hoàng 17](#_Toc508979792)

[SWOT Analysis 17](#_Toc508979793)

[Learning moments 17](#_Toc508979794)

[Self-evaluation of spent effort 17](#_Toc508979795)

[Improvements for next project 17](#_Toc508979796)

[Appendices 18](#_Toc508979797)

[Appendix A: Report of the interview with the client 18](#_Toc508979798)

[Appendix B: Process Report Setup 18](#_Toc508979799)

# Week 1.5

## Meeting #0.5

Date: Monday 12th February 2018  
Time: 10:00 AM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Talia, Thanh, Chanelle

#### Agenda

1. Company’s name and logo
2. Project plan v1.0
3. Questions for client

#### Company’s name and logo

Discusion: The name for the company should relate to our names. EL from Chanelle, ON from Dholon, IA from Talia and AH from Thanh, forming ELONIAH

Final decision: ELONIAH (see logo at top)

#### Project plan V1.0

Discussion: The cover and set up

#### Questions for client

Discussion: What the questions will be for the client

## Task Delegation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Start Date** | **Assigned to** | **End Date** | **Completed by** |
| Company’s name | 12 Feb ‘18 | Everyone | 12 Feb ‘18 | Everyone |
| Company’s logo | 12 Feb ‘18 | C. Hart | 20 Feb ‘18 | T. Hoàng |
| Project plan v1.0 | 12 Feb ‘18 | Everyone | 20 Feb ‘18 | T. Santos |
| Questions for client | 12 Feb ‘18 | Everyone | 20 Feb ‘18 | Everyone |

# Week 2

## Meeting #1.0

Date: Tuesday 20th February 2018  
Time: 3:00 PM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Project Team, Mentor, Client

**Roles:**

* Chair: Talia
* Secretary: Thanh
* Minute taker: Chanelle

#### Agenda

1. Presenting the revised project plan.
2. Presenting what the team have researched for identification methods and ask for the mentor’s advice.

**Advice on revised project plan**

Discussion and advice over:

* The following parts of the document were not up to par: problem description, project statement’s introduction.
* Phrasing of document was leading to misunderstanding.
* Source code vs. Licensing the software
* Advised to add the following: detailed process of application, architecture, workflow diagram
* Advised to prepare our presentation of prototype to the client soon.

**Advice on ID methods**

Discussion and advice over:

* RFID:
  + Cost-efficient: cheap, reprogrammable and better than plastified paper
  + Obtainable to use as a demo at the end of this block.
  + Can be used in parallel with barcode for extra security.
* Final decision for QR Code: should be used as tickets

**Extra points discussed during the meeting**

*System risks*

The mentor brings up risks for us to consider. Namely, he suggests a few cases where the applications crash (database issues), or the ID method fails (smudged barcode).

*Conduct of meeting*

The mentor suggests we do the rotation on positions for next meetings, so everyone can learn each role

# Week 3

No meeting. Tasks were deligated as follows:

|  |  |
| --- | --- |
| **Task** | **Assigned to** |
| Database design | Thanh |
| Documentations | Chanelle |
| Application designs | Dholon |
| Website design | Talia |

# Week 4

## Meeting #2.0

Date: Tuesday 6th March 2018  
Time: 3:00 PM – 3:30PM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Project Team, Mentor

**Roles:**

* Chair: Chanelle
* Secretary: Thanh
* Minute taker: Thanh

#### Agenda

1. Ask for mentor’s advice on what we have researched for RFID cards
2. Ask for mentor’s advice before meeting with the client.
3. Ask for mentor’s advice on the architecture we made according to previous feedback.
4. Present our bare layout for the setup document to see if we may be missing something

**ID Methods**

*Barcode*

We discuss the risk of losing the barcode and the respective solutions: re-verify ID, get another card at a price or relocate data.

*Bracelet*

The mentor proposes categorizing participants by their bracelet colors as a visual aid for visitors and staff. We should also note the price of the bracelet.

**Architecture**

The mentor gives us an example draft of a blueprint: how all applications are connected to each other and to the database.

He also proposes a decentralized system for databases so that when one fails, the whole system stays functional. A backup database was also mentioned.

The mentor stresses on the risk of a database crashing and reminds us about the robustness of our software solution

The mentor suggests things we can include in our architecture: back-up mechanisms, availability of database. He also mentions that we should opt for a more networked design.

**Setup document**

The mentor suggests changes to layout of the document: the MoSCoW section should be an appendix.

The mentor suggests a detailed description of all processes involved in the architecture.

The mentor suggests adding a ‘Dependencies’ section to the document, stating in details the dependencies and risks of our software.

**Project plan**

The mentor remarks that the Table of Contents looks good.

Meeting #3.0

Date: Tuesday 6th March 2018  
Time: 3:30 PM – 4:00PM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Project Team, Mentor, Client

**Roles:**

* Chair: Chanelle
* Secretary: Thanh
* Minute taker: Thanh

**Agenda**

1. Propose our budget
2. Discuss how to handle source code after the project is over
3. Present our research and proposal for identification in events
4. Discuss further into the website: the must-have's, should-have's and would-be-nice-to-have's

**Budget**

The client thinks the budget requires further justifications: hours spent and the licenses necessary.

The client agrees with a proposed amount of 5000 euros; however, our mentor thinks it can be improved.

**Handling of source code**

If we want to sell the software as a license with an expiration date – thereby keeping our work copyrighted – we will need a maintenance contract to the client.

**Identification: cards or bracelets**

The client prefers bracelets despite its higher price (negligible to him). He thinks it is more personal and harder to lose than a card. He thinks categorizing people by their bracelet is a good idea and he also suggests having different member access for different bracelets.

The client emphasizes security of method: if the price is higher but the device is more personal and cannot be swapped from person to person, we should opt for that device.

**Website**

|  |  |
| --- | --- |
| Must-have | Nice-to-have |
| The client mentions:   1. Visual appeal 2. Should be informative to visitors 3. Commercial functions: tickets, reservations and cancellations 4. Personal information of visitors *must* be carefully stored. | 1. About page for the client’s company. (Proposed and approved) 2. About page for the event itself (Proposed) 3. Room for feedback and reviews (Client) 4. Links to social media (Client) 5. Picture gallery (Mentor) |

**Extra points discussed during the meeting**

*Event*

We proposed to the client bundled prices and he thinks it would be an interesting option to consider.

*Application*

The application will run on Windows, only the website will run on mobile devices. However, the client thinks it will be fancy if we have a mobile app for the event.

# Week 5

## Meeting #3.5

Date: Tuesday 13th March 2018  
Time: 2:50 PM – 3:30PM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Project Team, Mentor

**Roles:**

* Chair: Thanh
* Secretary: Thanh
* Minute taker: Chanelle and Talia

**Agenda**

1. We will ask for the mentor’s feedback on the Project Plan v2.0
2. We will ask for the mentor’s feedback on the Setup Document v1.0
3. We will briefly update the mentor on our progress as a whole

Meeting had to be cut short due to the mentor having previous engagements. The next ProP Meeting will be on Tuesday, and will be extended due to this meeting’s time  
being cut short.

**Feedback**

We have assisted the mentor in setting up his local git repository. He will inform us when he will be ready to give us feedback. In the meantime, he will let us know after he has pushed the comments on git.

**Security**

We have to consider the security of the website when it comes to transactions: we’re  
currently limited to the knowledge from WEB1. We may have to learn more.

## Task Delegation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Start Date** | **Assigned to** | **End Date** | **Completed by** |
| The architecture | 13th Mar ‘18 | T.Hoàng | - | - |

Next meeting will address points on this week’s agenda and potentially future issues after we have received the mentor’s feedback.

# Week 6

## Meeting #4

Date: Tuesday 20th March 2018  
Time: 3:50 PM – 4:25PM  
Location: Fontys R1 2nd floor, Common Area  
Attendees: Project Team, Mentor

**Roles:**

* Chair: Thanh
* Secretary: Thanh
* Minute taker: Chanelle

**Agenda**

1. Discuss the Project Plan
2. Discuss the Setup Document
3. Ask for the mentor’s advice before meeting with the client

We have received the feedback on our git repository. Therefore, the meeting was shorter than expected as we only had to clarify a few points instead of going over everything like we’d initially planned.

**Project Plan**

The mentor raised a question of which documents were going to be continuously updated and which ones were going to be frozen.

We agreed that the Project Plan is the only plan that freezes and it defines the start and the direction. Therefore it should:

* Have more predictability
* Be abstract as possible

The mentor also reminded us that the Project Plan can be changed, but only with the agreement of all stakeholders.

**Setup Document**

The mentor asked about the people authorized to access the applications: except for the self-service store applications which are open to all visitors, the rest is only for personnel.

The mentor suggested:

* Add page numbers to all documents
* Clarify the database and show that updates to the database are immediate

There was a statistical feature which was not clear to the mentor and so we were advised to reconsider the phrasing of the feature.

**Schedule planning**

We agreed to:

* Deliver the final, modified Project Plan and Setup Document at the end of this week
* Keep the appropriate documents continuously updated

For the client, we agreed that:

* There will be one final proof-read of all documents conducted by the mentor before we present it to the client
* We will only invite the client for important questions: In this case, he will be invited for the website and the GUI.
* Method of presentation: interactive meeting.
* After presenting, we will also propose our budgets and finalize an agreement.

Any time we need feedback, we can also ask the mentor.

## Tasks delegation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Start Date** | **Assigned to** | **End Date** | **Completed by** |
| The Setup Document | 23th Mar ‘18 | T.Hoàng | 23th Mar ‘18 | T.Hoàng |
| The Project Plan | 23th Mar ‘18 | C.Hart | - | - |
| HTML & CSS for:   1. Activities 2. Camping 3. Camping Registration 4. Events 5. Login 6. Rules 7. Setting 8. Sign up | 19th Mar ‘18 | T.Santos | - | - |
| HTML & CSS for:   1. Bundles 2. Company’s Information 3. Food & Drinks 4. Homepage 5. Loaning Items 6. News 7. News Extra 8. Participants | 19th Mar ‘18 | D.Akter | - | - |

# Week 7 - 9

Preparations for exams

# Week 10

Finalization of the work. Meeting to be discussed.

Meeting #5

Date: 24th April, 2018

Time: 15:15 to 16:00 (3:15 – 4:00 PM)

Location: Fontys R1 2nd Floor Common Area

Attendees: Project Team, Mentor and Client

Chair: Thanh and Chanelle

Minute taker: Talia

Thanh went over the setup document and Chanelle over the project plan briefly. Client will go over the documents presented and review them in his own time, providing his comments and thoughts on them at a later date.

A small demo was given of both the static website and the applications designed.

Website:

* Two versions were showcased
* One was considered an older style of website, while the second was considered more of a modern style. Comments were made regarding the fact that it would take more scrolling on the modern version and less information could be shown to fit this style, no final preference was given.
* Some questions regarding design choices and content explanations were given.
* “Setting” was not an attractive word for its purpose, it was suggested that we find a different word that would suit it better. One suggestion: Campaign instead of Setting, with “The Story So Far” at the top of the page, or something of this nature.

Applications:

* Questions regarding design choices and future functionality, as well as detailed explanations, were given.
* It was requested that the applications have a more visual interface, more pictures (example: application for shop have pictures of the items rather than just their names).
* The various windows that are opened upon clicking the various buttons and the fact that they are all fixed position was regarded as messy and confusing, as well as there being too many clicks.
* It was requested that the applications do not allow the users to access Windows, therefore they should be full screen, hide the bar at the top, and run on start up. One suggestion: substitute the little windows for one main window that changes back and forth. Maybe use a hover on event to handle possible button confusion (i.e. someone not knowing what a certain buttons does).
* Have authentication on the applications.

Tasks delegations:

|  |  |
| --- | --- |
| **Task** | **Assigned to** |
| Setup Document | Chanelle |
| Project Plan | Chanelle |
| Process Report | Everyone |
| Website | Dholon, Talia, Thanh |

# Week 11-19

**Week 11-16**

* Work on website.
* Work on the applications.
* Work on the database.

**Week 17-18**

* Meetings with mentor for feedback.

Feedback Meeting 1&2

Date: 5th and 13th of May, 2018

Time: 15:00 to 16:00 (3:00 – 4:00 PM)

Location: Fontys R1 2nd Floor Room 2.88

Attendees: Project Team and Mentor

Chair: Thanh and Chanelle

Minute taker: Talia and Chanelle

Entrance App

Monitoring: have the option to search by name, phone number, and other things other than the ID. Leave the changes for the admin, and not in the monitoring areas. READ ONLY.

Camp App

Check in: implement the pop in into the sheet, instead of a pop up

Shop

Use the bracelet as a login method for employees, instead of username and password for the shops.

Have an order number per order.

Loan

Have the visitor pay deposit and price (25 and 50 total 75) and when they return, they get 25 back.

Extra

We keep the information for a given time period: 3 months for example. Andre wants to keep a log of people.

All applications should be designed properly.

Make the OKAY and EXPIRED and NOT OKAY references more defined.

Manager

Visitors who have NOT visit as yet. Make a pie chart.

Every shop should have an inventory tab to restock and see if they’re low on stock.

Staff: Drop down box should change without having to click display. Have the option to show all in the drop down box.

Bank: Read a new file automatically. Access the location without having to search. Should be an automatic process.

Charts: clustered. Not necessary. Save it at the end of the event.

**Week 19**

* Preparations for exams.
* Work on the process report.
* Finalize and hand in all deliverables.

Tasks delegations:

|  |  |
| --- | --- |
| **Task** | **Assigned to** |
| Setup Document | Chanelle, Talia, Thanh |
| Project Plan | Chanelle, Talia |
| Process Report | Everyone |
| Website | Chanelle, Thanh |
| Applications | Everyone |
| Recomendation Document | Thanh |

# Week 20

Prepare final demo presentation.

Everyone is assigned to participate in this task.

# Individual Reflection

# Dholon Akter

## SWOT Analysis

|  |  |
| --- | --- |
| **Strengths** | **Weaknesses** |
| Prseenting skills  Software skills  Working in team  Problem-Soving skills | Communication problems  Diffcult in understanding  Lack of patience. |
| **Opportunities** | **Threats** |
| Get more help in project assignment  Chance to make own ideas to solve the problems. | During this project continution my eldest  Sister passed away.  Car Accident and Surgery |

## Learning moments

* Beginning of the project it was really difficult to understand the basic concept of project that how it will work in real situation , but when I started working smoothly , then I have realized how it will be going to work in practical.
* Sometimes I feel so much difficulties to understand simple things quickly but when ask to my team members they make it really simple for me.
* I learned how to work together by co-operating to each other and solved the problem easily.

## Self-evaluation of spent effort

As far as I think spent effort is sufficient.

## Improvements for next project

* Understanding the context quickly.
* Documentation skills.
* Communication skills (how to present my ideas nicely to members, mentor and client).
* Self-Confidence about the problem-solving.
* Patience of work.
* Avoid excuses.
* Self-discipline, Determination, Consistency of the work.

# Chanelle Hart

## SWOT Analysis

|  |  |
| --- | --- |
| **Strengths** | **Weaknesses** |
| Documenting skills  Organizational skills Presentation skills | Lack proactivity  Lack punctuality  Lack motivation |
| **Opportunities** | **Threats** |
| Get ahead in deadlines  Start healthy habits – sleep early  Find motivational books | Loads of third-party assignments  Distractions |

## Learning moments

* Everyone has their own view and style for the project, and our ideas tend to clash. I learned that with patience and cooperation, we can create something better than our individual ideas.
* During the 3rd meeting, I learned that we cannot accept the price our client offers us, and we have to fight for a better offer.
* I learned that an organized meeting retrieves better results than a prolonged one.
* I learned that anything could happen, like a groupmate going through struggles and then the workload increases per remaining member.
* I learned that not everyone cooperates with your ideas and will take time (like the next day) to form a general understanding.

## Evaluation of spent effort

* Loads of documentations – I enjoyed it to a certain extent. Was a lot at the end.

## Improvements for next project

* Work in advance.
* Find talent in individuals before forming groups.
* Bring motivation and being aware of what’s to come
* Procrastinate less often.
* Be on time.

# Talia Santos

## SWOT Analysis

|  |  |
| --- | --- |
| **Strengths** | **Weaknesses** |
| Presenting skills  Team work  Fairly dedicated | Problems with grasping concepts from courses’ knowledge necessary for this course.  Very easily have trouble with specific tasks due to having difficulties with the base knowledge.  Horrible time management.  Proactivity leaves much to be desired at times. |
| **Opportunities** | **Threats** |
| Organize time better so my performance in both the project and other courses does not suffer.  Ask for help more.  Research more to make up for gaps in knowledge.  Develop better organizational skills to achieve better time management, and therefore, become more efficient. | Problems juggling time between project and other assignments from other courses.  Being at a complete loss of what to do to keep up with the rest of the team’s skills and being afraid to communicate it. |

## Learning moments

* I realized very quickly that sometimes getting everyone on the same page took more effort and better communication than I ever thought. Ultimately, it was our differences as individuals that made for the best results, since we can get a diverse variety of opinions and points of view at times.
* Communicating your difficulties and asking for help can actually speed up tasks within the project, and it’s alright to ask for help.
* Organizing is truly essential, could clearly see the difference in the different meetings we’ve had.

## Self-evaluation of spent effort

Spent effort was sufficient, I’d like to say.

## Improvements for next project

Learn and understand other crucial courses’ material faster. Seek help and research more.

Learn to research appropriately, in regards to programming issues. Learn to filter information better.

Organize time better and work more efficiently. Avoid distractions.

Learn to not be as dependant on peer approval.

# Thanh Hoàng

## SWOT Analysis

|  |  |
| --- | --- |
| **Strengths** | **Weaknesses** |
| Grasp concepts fairly easily  Sufficiently dedicated | Troubles conveying ideas  Impatience  Taking over work too much |
| **Opportunities** | **Threats** |
| Work on interpersonal communication  Work on asigned division of tasks, and help others when necessary | Working too individually  Miscommunication |

## Learning moments

* I learned that a disorganized meeting is taxing on the team’s performance
* People are good at different things; being patient with myself when I am not good and others when they are not good will be beneficial for all parties involved.
* Sometimes being less focused on the final product and more considerate to teammates is preferred

## Self-evaluation of spent effort

The spent effort is sufficient.

## Improvements for next project

* Be a lot more patient
* Communicate ideas and opinions in a more filtered manner
* Consider things from an emotional standpoint

# Mark justification

The project team believes the given solution deserves a 9.0.

## Strong points

### Database

It is required that the database should be efficient.

The given database offers:

* Efficient adding/modification of data

Data only needs to be modified in one table, as opposed to copy and pasting multiple times.

* Restrictions on updating/deleting records

The tables reference one another and so an unreasonable modification of the database is not allowed. For example: it is not possible to refer to a non-existent visitor.

* Various views for easier data retrieval

The views reduce the complexity of queries to be performed.

### Website

#### The website is required to support login, signup and reserving/purchasing of tickets and camping spots.

The given website meets the requirement and offers:

* Dynamic QR code generation

The QR code for the entrance is dynamically generated based on the ticket number of the visitor.

### Applications

#### All applications

There is authentication on all applications to ensure only the right people are getting access to them.

There is a log function on all applications to search and/or view relevant data to the user of said application.

The applications also have visual appeal as they are styled differently from the mundane windows form approach.

#### Entrance/exit applications

For these applications, it is required that the applications should be able to check the visitors in and out with their RFID.

The application not only meets said requirement but offers:

* QR code scan

The entirety of the QR code scanning and decoding was added by the project team to provide the user with an extra layer of security.

* Multi-layered security

Layer 1: QR code. The QR code is first scanned and the ticket is checked to see whether or not it has already been paid.

Layer 2: Check for potential misuse. For a ticket, its entry time is checked to prevent multiple entries of the same QR code. For a reservation, its end date will be checked to see whether or not it has expired.

* Admin rights

The application offers the possibility to override the restrictions in place by logging in as admin.

#### Rental applications

For these applications, it is required that the applications should support the process.

The solution not only meets said requirements but offers:

* Automated scan to loan

In order to loan an items, the user only has to scan their RFID, the necessary equipments and then click a button. The rest is automatically done for them.

* Automated scan to return

In order to return an item, the user only has to scan their RFID and the items. The rest is automatically done for them.

#### Shop applications

For these applications, it is required that the applications should support the process.

The solution not only meets said requirements but offers:

* Visual aids

The items are loaded not just as labels but also with pictures and color-coding. This provides visual aids to the user.

#### Manager applications

For these applications, it is required that the statistics for the events should be shown.

The solution not only meets said requirements but offers:

* Data visualization

There are charts made from the data for the user to have a better view of their events.

* Various sort options for data

The data displayed can be sorted by clicking on its columns. The sorting can be ASC or DESC.

* Transaction logs

It is specifically required that the logs should be added to the database.

This process is automated by the solution: the user chooses a file path and after that, whenever a file is added to that path, the logs will be updated.

* Visual aids

The records are also color-coded based on their status. For camping: the row is red if the spot is taken and green if not.

## Weak points

### Database

There is no locks or transactions in place – which means there are concurrency issues. There are also no way to revert to an original state if one of the SQL statements fails.

Possible failure scenarios:

* Two people trying to modify the same quantity for an article will lead to concurrency problems – which can be solved with locks placed by the database.
* When handling an order, if one of the steps fail – for example, if the deducting credit fails – then there will be problematic data in the database as the order and the order’s information are still registered but no credits were deducted.

Solution:

* Concurrency control: optimistic and pessimistic locks in the database
* Implement a transaction so there is an option to rollback if one of the steps fail and only commit changes once the whole batch of SQL statements are successful

### Website

The website is not fully responsive.

### Applications

Not all the applications are fully implemented with try-catch. There can be potential scenarios where one of the variables are initialized as null or are not properly reset.

The closing and opening of forms are not as smooth as wanted.

# Appendices

## Appendix A: Report of the interview with the client

## Appendix B: Process Report Setup

A sufficient structure of the process report might include the following:

* Title page
* Table of contents
* Global work division
* Week 1:
  + Minutes
  + Who did what
* Week 2:
  + Minutes
  + Who did what
* …
* Week 20:
  + Minutes
  + Who did what
* Mark justification
  + What mark do you feel you deserve
  + Justify by mentioning the strong and weak points of your system and process
* Individuals reflections
  + Strong/Weak traits that affected the project
  + Learning moments from the project
  + Evaluation of spent effort
  + Improvements for next project (what could you do better next time?)
* Appendix A: Report of the interview with the client