Project plan



**Data**

* Name: Bas Martin (618593), Luc Melleé (610723), Jae Hwa Ma (646424) & Tom Maessen (601783)
* Date: 17-04-2020
* Project group: five (5).
* Accompaniment: Matthijs de Jonge (client), Marco Engelbart (supervisor) & Helen Visser (professional skills teacher)
* Version 1.0

**Version control**

|  |  |
| --- | --- |
| **Version** | **Note** |
| 0.1 | Initial setup project plan |
| 1.0 | Submission version |

Table of contents

[1. Introduction 3](#_Toc37940196)

[2. Context 4](#_Toc37940197)

[3. Motive for the project 5](#_Toc37940198)

[4. Objective, assignment and results to be delivered to the company 6](#_Toc37940199)

[5. Project boundaries 7](#_Toc37940200)

[6. Conditions 8](#_Toc37940201)

[7. Products to be delivered and quality requirements 9](#_Toc37940202)

[8. Project methods and tools 12](#_Toc37940203)

[9. Project organization and communication 13](#_Toc37940204)

[9.1. Persons involved in this project 13](#_Toc37940205)

[9.2. Planned meetings 13](#_Toc37940206)

[9.3. General group arrangements 13](#_Toc37940207)

[10. Planning 15](#_Toc37940208)

[10.1. Submission- and review dates 15](#_Toc37940209)

[10.2. Free days 15](#_Toc37940210)

[10.3. Layout Rup 15](#_Toc37940211)

[10.4. Weekly planning 15](#_Toc37940212)

[10.5. Gantt Chart 16](#_Toc37940213)

[10.6 Iteration 16](#_Toc37940214)

[10.6.1. Inception iteration 16](#_Toc37940215)

[10.6.2. Elaboration iteration 16](#_Toc37940216)

[10.6.3. Construction iteration 16](#_Toc37940217)

[10.6.4. Transition iteration 17](#_Toc37940218)

[11. Risk 18](#_Toc37940219)

[Appendix A: Competencies 20](#_Toc37940220)

[Appendix B: List of products 20](#_Toc37940221)

# 1. Introduction

Super Cinema’s sells vouchers that can be exchanged for movie tickets, snacks, drinks, etc. These vouchers are sold at different points of sale near the branches of the cinema, such as supermarkets and convenience stores, and in the cinema branches themselves.

Super Cinema’s still uses a very old database to store its different vouchers and it is outdated. For this reason, Super Cinema’s wants a new database that is still able to hold vouchers that already exist.

This document will describe the approach to this project. The goal is to explain what the project entails, what the results should be and how the team is going to realise the project.

In order to have the project go smoothly, the goal of the project is defined. After which the boundaries for the project are established and the conditions needed to accomplish the goal of the project, will be discussed. There will be a description of the products to produce in this project and there will be an explanation on the used project method. The planning for the project will be present and the risks within this project will be discussed.

# 2. Context

Super Cinema’s is a cinema chain located near Nijmegen. They are a service cinema. This means that during the movies, customers can order food and drinks. An employee goes to a customer during the movie to take their order, they scan the vouchers of the customers and bring the order to the customer.

Super Cinema’s has different types of vouchers that can be bought at their local branches or nearby supermarkets and convenience stores. The difference in voucher type is that some can only be used to buy food and/or drinks, others only for the movie ticket. These can also differ in that they can be for the entire range of products or a specific product, this goes for food, drinks and movies.

To store these different type of vouchers Super Cinema’s has a database. However, over the years this database has become outdated and now they need a new database that can store their vouchers.

# 3. Motive for the project

The main motive for this project is that we want to show that we are competent enough to pass the ISE semester. The project itself will act as a practical test for all the knowledge and skills collected during the courses given in the first half of the semester. In order to show that we are competent we must comply with the competencies presented by the school. These competencies can be found in Appendix A.

The company is already in possession of a database, but this one is very old. They have been looking for updating their database systems for a long time now and have chosen to start working on updating it now. So, Super Cinema’s chosen to assign this project to finally update their old systems. This new database will be used for the same purposes as the old database.

# 4. Objective, assignment and results to be delivered to the company

Super Cinema’s is in possession of a database system that keeps track of vouchers that can be redeemed to order drinks, snacks etc. Right now, they are looking to upgrade their database systems as they are very old.

The goal of the assignment is to create a database that is flexible and more efficient than what Super Cinema’s is using now. The data from the old database should be able to transfer to the new database and data integrity has the highest priority.

The products that need to be created will be a new database (in which vouchers that already exist can be stored), a functional design (in which requirements and visualizations of the domain can be found) and a technical design (in which designs such as a physical data model can be found).

# 5. Project boundaries

To get a clear view on what the project entails and what does not, the following cases are the boundaries for this project.

* The project starts on 2020/04/14 and ends on 2020/06/12 unless other agreements have been made between the client and the team.
* School rhythm dictates the project deadlines.
* The team is only responsible for the creation of the information system.
* The workhours for the team during this project will be from 9am until 5pm with a one-hour lunch break from noon until 1pm.

# 6. Conditions

In order to ensure the highest quality of our products and a proper execution of the project we must set up a couple of essential conditions. For us to work at a maximum efficiency it is of the essence that we have access to the following:

* A working internet connection.
* A working Microsoft Teams environment.
* A non-distracting workspace.
* A working tool stack (A detailed list of the tool stack can be found in chapter 8.)

In addition to the above we also heavily rely on several things, which are mostly out of our control:

* Meetings can be planned with Process supervisor and/or Client.
* The Process Supervisor is available between 9AM and 5PM to help us if necessary.
* A daily stand-up must be held to ensure a proper workflow.
* A good uptime of both bitbucket and JIRA.
* A good uptime of Microsoft Teams.

# 7. Products to be delivered and quality requirements

Below all the product to be delivered during this project with corresponding quality requirements can be found:

|  |  |  |  |
| --- | --- | --- | --- |
| **Product** | **Product quality** | **Activities required** | **Process quality** |
| Project plan | * Is based on the template vision template found on: <http://www.rupopmaat.nl/naslagsite2011/index.html> * Chapter 10 has all the components from the ‘Software development Plan template’ found on: <http://www.rupopmaat.nl/naslagsite2011/index.html> * Chapter 11 has all the components from the risk list found on: <http://www.rupopmaat.nl/naslagsite2011/index.html> * Follows the structure of ‘Toelichting op Pva v3.0’ | * Thoroughly go through the assignment. * Review of the Project plan in the group. * Project plan assessment. * Have a meeting with the client. * Make the chapters from the ‘Toelichting op PvA v3.0’ in the project plan. | * Project plan assessment on May 4. * Review together of the document. |
| Functional design | * Meets requirements set for a Functional Design as taught in the DMDD course | * Determine requirements * Make a UC diagram * Write fully dressed use cases * Make a conceptual data model * Write down user privileges | * Draft to be reviewed by at least two experts |
| Technical design | * Meets requirements set for a Technical Design as taught in the DMDD course | * RMDBS * Make a PDM * Make a system and software architecture | * Draft to be reviewed by at least two experts * Document design choices should be consistent with requirements in FD |
| Code | * 80% (successful) unit tests * Comment in English * Sufficient guideline * Traceable to specific requirements | * Writing code * Writing unit tests * Review code | * Weekly code review * Proper pull request review |
| Database | * Is formed based on the third normal form. | * Create DDL script * Add security permissions * Create logins * Create users | * The create scripts for the database are reviewed by the project group. |
| Individual project report | * Gives the reader inside in if the ISE competences are all achieved based on individual contribution. | * Every team member must show that they achieved all competences. * Write down learning objectives. | * Keep up a daily logbook. * Ask for feedback to the professional skills teacher |
| Presentation (intermediate and the end) | * Presentation is purposely drafted. * The duration of the presentation is about 30 minutes. | * Make a presentation. * Prepare the presentation. | * Practice it at least 2 times. |

*Table 7. - The products to be delivered and quality requirements*

**Definition of done**

These are the quality requirements de project team uses to decide if a task is done.

Documents:

* Every document is reviewed to guarantee the norms of the ICA control card.
* Every use case is described with as minimal a brief description. Not ‘CRUD’ use cases are provided with a fully dressed description.
* The requirements are checked by the client.
* Every domain consists of a domain description.
* Pictures and tables are described.
* Pictures and tables are numbered.

Code:

* Database is structured based on the third normal form.
* At least 80% of the code is tested with unit tests.
* The code is committed on Bitbucket with a meaningful description (in English).
* The code is written in English.
* Code has comments to ensure readability if necessary.

# 8. Project methods and tools

For this project we will be making use of the, by school prescribed, development method named RUP. A project in RUP is divided into 4 phases. The Inception phase, which is also the first phase, is used to gather information and start designing the first drafts of the domain. The inception phase is then followed by the elaboration phase in which the focus is on designing the product that is supposed to be realised. Next is the construction phase. During this phase the development team will start working on realising the product as designed during the inception and elaboration phase. As for this project the transition phase has been skipped, but normally this would be the stage where, as a team, you are supposed to integrate the developed system into the existing environment and teach users how to use the system.

In RUP a team works with multiple development roles, for example: Software architect and use case designer. There are a lot of roles in the original RUP, but during this project we will be making use of Rup Op Maat, which limits the number of roles. Further information about the given roles and phases can be found in both Chapter 9 and on [www.rupopmaat.nl](http://www.rupopmaat.nl). During our project we will assign roles to a person. However, this will not make them solely responsible for that role as anyone who wishes could act out that role. Their task lies in the end responsibility of the quality of the products provided by that role.

During our project we will hold a daily ‘mic check’. During this check we will ask everyone what they have done, what problems or struggles they have encountered and what they will be doing for the following day. Our goal with this check is to ensure that all work will be complete in a timely manner and no one falls behind due to problems or struggles they encountered. At the end of every iteration we will conduct an iteration reflection where we will reflect upon our decisions and delivered work. Which such a reflection we hope to tackle any potential risks before they become problematic.

In order to do our work, we also set up a list of tools we will be using during the project:

* MSSQL Server for the implementation of the database.
* PowerDesigner for creating database models such as CDM’s and PDM’s.
* JIRA (<https://isejira2.icaprojecten.nl:8443/projects/IPG5/summary>), for an overview for the tasks and who’s working on what task.
* BitBucket (<https://isegit2.icaprojecten.nl:8443/projects/IPG5/repos/movie-vouchers/browse>), for file storage and history tracking.

# 9. Project organization and communication

In this chapter the people that are involved in this project are summarized, and the arrangements between them.

## 9.1. Persons involved in this project

The project team consists of 4 students. In this table are the contact details of every student.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Student number** | **Email** | **Phone number** |
| Tom Maessen | 601783 | [TC.Maessen@student.han.nl](mailto:TC.Maessen@student.han.nl) | 0631975740 |
| Jae Hwa Ma | 646424 | [JH.Ma@student.han.nl](mailto:JH.Ma@student.han.nl) | +447308937396 |
| Luc Melleé | 610723 | [L.Mellee@student.han.nl](mailto:L.Mellee@student.han.nl) | 0646475267 |
| Bas Martin | 618593 | [BTC.Martin@student.han.nl](mailto:BTC.Martin@student.han.nl) | 0612611457 |

*Table 9.1.1. - Project team*

Besides the project team the following persons are involved in this project, with the following contact details:

|  |  |  |
| --- | --- | --- |
| **Name** | **Email** | **Role** |
| Matthijs de Jonge | [Matthijs.dejonge@han.nl](mailto:Matthijs.dejonge@han.nl) | Client |
| Marco Engelbart | [Marco.engelbart@han.nl](mailto:Marco.engelbart@han.nl) | Supervisor |
| Helen Visser | [Hellen.visser@han.nl](mailto:Hellen.visser@han.nl) | Professional Skills |

*Table 9.1.2. - Stakeholders*

## 9.2. Planned meetings

The planned meetings are as followed:

1. We will have a meeting with our client (Matthijs de Jonge) at the end of every iteration to show our progress.
2. We will plan meetings with our client (Matthijs de Jonge) via email for additional information if necessary.
3. We will plan meetings with our professional skills teacher (Helen Visser) via email for additional information if necessary.
4. We will have weekly meetings with our supervisor, dates discussed via the mail (preferred during the start of the week) to show our progress and to state our problems if there are any.
5. We will have a meeting with our supervisor at the end of every iteration to review.
6. The project team will have an IPV on week 3 & 7 where they will include the supervisor (Marco Engelbart) and their professional skills teacher (Helen Visser).

## 9.3. General group arrangements

Our general group arrangements are as followed:

1. Present at 9:00, work till 17:00.
2. We will start the day of with a 'mic check’.
3. The workdays are from Monday till Friday.
4. By the IPV 0 means you work as expected, - and – means less than expected and +/++ means more than expected.
5. When a team member can’t be present at a time, he will inform his teammates.
6. There is a lunch break from 12 till 1 pm.

In the table below the role of every team member is summed up. From school there are 6 roles that need to be practiced, during this project. The 6th role is the role of Integrator however this role is not used. Because we don't have to integrate the system the integrator role has become deprecated. Every team member has been assigned to Team lead. This role will be rotating during the project because all members have a personal learning goal which requires him to have the role of Team lead.

|  |  |
| --- | --- |
| **Role** | **Person(s)** |
| Team lead | Tom Maessen, Luc Melleé, Bas Martin, Jae Hwa Ma |
| Information analyst | Jae Hwa Ma |
| Use case designer | Bas Martin |
| Software architect | Tom Maessen |
| Programmer | Luc Melleé |
| Tester | Luc Melleé |
| Secretary | Luc Melleé, Tom Maessen |

*Table 9.3.1. - Assign RUP roles*

**Role description:**

* Team lead: Responsible for the planning and managing of the project assignment on the side of the contractor. Also makes sure that the project team is on the right track and is focussed on their purpose (is the leader of the group and thus leads).
* Information analyst: Responsible for clearing up the requirements and modelling of the Use Cases, so he can determine and secure the functionalities and boundaries of the system.
* Use case designer: Responsible for specifying the Use Cases, including screen designs and screen progress.
* Software architect: Responsible for making and documenting the technical choices in a project. Also holds the responsibility of communicating the architecture and sees to it that it gets implemented.
* Programmer: Responsible of the technical design, implementing, documenting and testing of the software.
* Tester: Responsible for specifying test cases and documenting it in a test design and holds the responsibility of executing the tests.
* Secretary: Makes notes of meetings for further use.

# 10. Planning

The entire planning used for this project can be found in the chapters below. During this project there will be worked with RUP based on iterations. Here the start date of every iteration can be found with the free days as well. Sickness and other unpredictable thinks will not be considered.

## 10.1. Submission- and review dates

All the mentioned submission- and review dates are summarized:

* April 17 submission project plan hand in.
* May 4 assessment project plan.
* May 15 submission iteration 1.
* June 11 submission iteration 3.

## 10.2. Free days

Below are all the free days summarized:

* May holiday from the twenty-seven (27) of April to the third (3) of May.
* Liberation day on the fifth (5) of May.
* 2e Easter day on the first (1) of June.

On these days the project team will not be active.

## 10.3. Layout Rup

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Phase iteration** | **Start date** | **End date** |
| OW-0/1 | Inception iteration | 13 April 2020 | 17 April 2020 |
| OW-2/3 | Elaboration iteration | 20 April 2020 | 10 May 2020 |
| OW-4 | End Elaboration iteration  Start construction iteration 1 | 11 May 2020 | 15 May 2020 |
| OW-5 | Construction iteration 1 | 18 May 2020 | 22May 2020 |
| OW-6 | Construction iteration 2 | 25 May 2020 | 29 May 2020 |
| OW-7 | End construction iteration 2  Start construction iteration 3 | 1 June 2020 | 5 June 2020 |
| OW-8 | End Construction iteration 3 | 8 June 2020 | 12 June 2020 |
| OW-9/10 | Transition iteration | 15 June 2020 | 25 June 2020 |

*Table 10.3.1. - The Rup layout during this project*

## 10.4. Weekly planning

Underneath is a list with weekly occasions, when and how long it takes.

|  |  |  |
| --- | --- | --- |
| **Occasion** | **Recurrence** | **Duration** |
| Daily stand-up | Every morning | About fifteen minutes |
| IPV | Every iteration | One or two hours |
| Meeting with Marco Engelbart | Every week | About half an hour |
| Meeting with Matthijs de Jonge | After every iteration, or planned meetings for additional information | Depends on the amount there is to be discussed.  Estimation of about ten to sixty minutes |
| Meeting with Helen Visser | A day will be planned via mail. | Estimation of about thirty minutes to an hour |

*Table 10.4.1 - The weekly planning*

## 10.5. Gantt Chart

Underneath you can see the Gant Chart of this project. Between week 2 and 3 there will be a May holiday, during this week the project team will not work on the project. It is possible for a week to have two iterations (example week 4). This would mean that the first iteration stops in that week and a new iteration starts.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Week**  **Works** | **OW 0** | **OW1** | **OW 2** | **Holiday** | **OW 3** | **OW 4** | **OW 5** | **OW 6** | **OW7** | **OW 8** | **OW 9** | **OW 10** |
| Inception iteration |  |  |  |  |  |  |  |  |  |  |  |  |
| Elaboration iteration |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction iteration 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction iteration 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction iteration 3 |  |  |  |  |  |  |  |  |  |  |  |  |
| Transition Iteration |  |  |  |  |  |  |  |  |  |  |  |  |

*Table 10.5.1.- Gantt Chart*

## 10.6 Iteration

10.6.1. Inception iteration   
During this iteration the project team will investigate the assignment, write down question (if necessary) and while have a meeting with the client where they can ask their questions. On the end of this iteration a project plan will be hand in made by the project team.

## 10.6.2. Elaboration iteration

During this iteration the focus is on designing the product that is supposed to be realised. In this iteration the focus is on making a good base in the functional design and an architectural prototype. There should also be a global idea on how the system is going to look in the technical design.

### 10.6.3. Construction iteration

During this iteration the focus is on constructing the product. A first version of the technical design will be made and improved upon during the different construction iterations. The functional design can also be improved upon during this iteration.

### 10.6.4. Transition iteration

During this iteration the focus is on handing in the product to the client, after sufficiently being tested. The system will then be implemented in the current environment and the user will be taught where necessary.

# 11. Risk

In this chapter the risks are summarized that can occur during this project. In here there will be looked at the change that this risk will occur, the impact it will have, countermeasures to prevent the risk and an alternate strategy if the risk does happen. The owner of the risk is also stated as well and when a risk occurs this will be documented too.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Risk** | **Owner of risk** | **Opportunity(big-small)** | **Impact(big-small)** | **Countermeasure** | **Alternate strategy** | **Progress 16-04-2020** |
| Labor shortage | Team leader | Middle | Big | Find one-more group member. | Extra work.  More than 40hours for a week. | We started with five group members, but one member already passed the ISE project. This left us with four group members. Despite the loss of one member, we are still on schedule and the effect on the project is very small to nonexistent up to now. We had contact with Matthijs (coordinator ISE project and our client) about this and he assured us that even with four people, the project is more than doable. |
| Role problem  (leadership problem, responsibility problem) by rotation. | Team leader | Middle | Small | Every phase of changing role has a conversation to get feedback and to adjust role and responsibility clearly. | Fix a leader.  And make it role more rigid. | The RUP documentation is in Dutch, therefore the group members translated parts of the documentation to English for clarification and helped explain if something was unclear. |
| Tool defect. | Team leader | Middle | Big | Prepare another tool for just in case. | Decide what tool to use as replacement by conference.  Report to supervisor and follow the advice. | No tools have shown defects as of the day of writing. |
| Discrepancy with the planning (underestimation of project scale, unexpectedly high error correction cost). | Team leader | Middle | Big | Allocate time for an unexpected situation when planning. | Prioritize of importance and figure out along the priority rather than seeking completeness. | There has not been a discrepancy with our planning as of the day of writing. |
| Technical vulnerability | Team leader | Middle | Middle | Clarify their capability to colleagues at start of each phase. | Adjust work depends on the ability of each workers and supply training if it is needed. | One of the members was not familiar with GIT. So, a tutorial was prepared for him. |

*Table 11. - All the risks with the owner of the risk, the opportunity, the impact it will have, the countermeasure, the alternate strategy and the progress of a risk during a specific date.*

# Appendix A: Competencies

The competence can also be found in the Study Guide.

|  |  |
| --- | --- |
| **Competence No.** | **Description** |
| ISE P-1 | The candidate is able to design and implement a specific software development process using a software development process framework and to select and employ suitable methods and technologies. The  candidate monitors project progress and adjusts the planning as needed. |
| ISE P-3 | The candidate can draw up a dynamic model and a static model (i.e. a conceptual data model including business rules) for the information system that is to be developed and creates documentation for these models as part of the functional design of the system. |
| ISE P-4 | The candidate can create a technical design for the information system that is to be developed that is consistent with the functional design and can relate each design decision to the requirements for the project. |
| ISE P-5 | The candidate can assess the quality of the design throughout the development process and makes adjustments as necessary. |
| ISE P-6 | The candidate can implement the information system while working together in a team. The implementation is consistent with the technical design and where it is not the reasons for the discrepancies are motivated. |
| ISE P-7 | The candidate can test (the parts that make up) the information system in a structured fashion. |
| ISE P-9 | The candidate contributes to the functioning of the development team as a whole and supports other members of the team in performing their duties. |
| ISE P-10 | The candidate can independently acquire required domain specific knowledge and skills as needed. |

# Appendix B: List of products

The table below lists all products that need to be created during this project. This list is also found in the study guide.

|  |  |
| --- | --- |
| **Product** | **Contents** |
| Project Plan | Base your project plan on the document “Toelichting op Pva  v3.0”. Also include in your project plan the contents of the Vision  document and a definition of requirements. For more information  see the kick-off slides (on Onderwijs Online). |
| Functional Design (FD), to be  added to during each iteration | Should contain an overview of all business process including  information flows. Provide a use case model, a list of functional  requirements, a conceptual data model including business rules,  an interaction model (CRUD matrix with entities mapped to use  cases), story boards and interface mockups (if applicable).  Also, if applicable, map groups of users and user roles to the use  cases they have permissions for.  Provide a test plan. |
| Technical Design (TD), to be  assed to during each iteration | Should contain nonfunctional requirements, a physical data  model including integrity rules, information on the system  architecture and the software architecture, and clear and  traceable information on the technical implementation of the  requirements in the Functional Design. |
| Source code |  |
| Relational database |  |
| Test report | The test report should list the scenarios that can be tested as well  as the result of these tests. |
| Project management artifacts | These include all the documentation that describes how the  project was executed, such as:  • Iteration Plans  • Logs containing activities undertaken by each team  member on each day during each iteration  • Project start up reports  • Photos / screenshots of planning boards, both at the start  and at the end of every iteration  • Iteration review reports  • Iteration and phase delivery reports (including  presentations if applicable). |
| Information on your individual  contribution to the project | Describe how you took part in organizing, preparing and / or  leading activities such as:  • Customer meetings  • Quality reviews  • IPV meetings  • Progress meetings  • Code reviews  • Etc. |
| Individual project report | The individual project report describes the work you have done  during the project and provides insight in your expertise as it  pertains to the project. |