Project P-phase
Student workbook

Project ProP: a system for organizing a social event

Introduction

In period 3 and 4 of your first year at Fontys ICT you will work on a system for a company, which organizes events. You might think of events, like a lan-party, a pop festival, a market, or whatever. Use your own imagination as a group to create your own events based on the requirements set further in this document. The idea is that people can visit the website of a certain event, even long time before the event takes place, to get information about the event and to make reservations.

When the event takes place, the organization should have the ability to check if a visitor has paid. During the event persons might like to sleep in their tent on the camping ground, so it should be possible to make a reservation for a camping pitch on the camping ground.

It should be possible to assign some kind of identification to visitor, for instance a barcode, QR-code or an arm brace with an RFID-chip in it. What exactly is not clear to the organizing company. Maybe you can help in finding out which kind of identification is suitable. This kind of identification should make it possible to pay for food and drinks, so a visitor does not need to carry money during the event.

The required and chosen hardware is limited available at ISSD at Fontys.

Objective

You have learned some techniques on steering a project, the project deliverables and basic programming. The objective of the ProP is to integrate your learned knowledge into a project with described deliverables. To use your imagination and freedom to build the best product for the customer. And further to learn to work together with different disciplines and experience the dynamics in a project environment instead of executing assignments on your own.

You need to provide some deliverables like a specification of the requirements, a website, a design and implementation of a database and some applications. At the end you will give a presentation about the project.

Who is allowed to join this project?

You are allowed to join this project, if you received permission from the exam board.

Way of working

In the first lesson groups of 4 students are formed and every group will get a tutor (coach). Students may do a proposal for who is in the group, but try to use a mix of students, this will thrive the benefit in the project. Every week there is a meeting with your tutor and in some

weeks there are classical lessons. In the schedule you can see what you have to deliver and when. In the last week every group will do a presentation for an audience, which are some tutors and the other students.

The presentation must be done by all members of the group!

Assessment

In this project you will get marks for sub-deliverables and for the way you work in the group. Your final mark is a weighted average of these sub-marks. Every student gets an individual mark. The final mark is a multiple of 0.5 (so it could be a 6 or a 6.5 or a 7or a 7.5 or . . .). Since this project leans very hard on group-work, you should be there on every scheduled moment.

The first time you miss a meeting and you do not have a good reason, you get a warning. Consequence is that your final mark will first be calculated as mentioned further in this document, and then be lowered by 1 point (out of 10).

The second time you miss a scheduled moment without a good reason, you are no longer welcome in the group: you must leave the group. In this case your final mark will be a 1.

About the assignment

Your company has got the assignment to deliver a system for a social media event. This is a meeting for young people on a big terrain (area, field), where they will place tents for musicians and work-shops, sell foods and drinks, have a place where visitors can loan materials, and some more.

On the terrain there is a network for modern digital communication, so it is possible to install databases and use them in applications. May be you can set up a service like FaceBook, Twitter or LinkedIn, so the visitors of the event can share information.

On the terrain there is a pc-doctor who can help young visitors if they have problems with their laptop.

The event starts on Friday-evening and last the whole weekend. The event takes place nearby camping "Park Kuierpad" (see appendix A for a map of the camping). It should be possible to make a reservation for a camping spot on the camping ground.

Before the event

Before the event takes place people can visit a website. On this website they can find information about the event and it should be possible to make a reservation.

Every participant gets a unique identity number and a so called "event-account". This event-account is identified by the unique identity number.

The entrance price for the event is 55 euro. The participant will get some kind of identification, for instance an arm brace with an RFID-chip, containing a unique identity number. This arm brace will be used at the entrance to check if the participant is allowed to enter the event. During the event the participant can use the arm brace to pay for food or drinks, etc. Or a participant gets ia unique identity number by e-mail. So if a visitor has made a reservation, he/she gets a confirmation e-mail with some information (as its name, date of reservation, his/her unique identity number, asking him/her to deposit some money to the bank account of the organiser of the event).

Everyone, who makes a reservation for the event, should transfer an amount of money to the bank account of the organisation of the event. The company sets the balance of its event-account to his/her payment (minus the entrance price of course).

A group of participants can book a camping spot by choosing a free spot on the map of the camping. Every spot can be booked for at most 6 persons.

To make a reservation for a camping spot you should specify all participants and specify which one of them will get the bill. You can only make a reservation for the whole weekend; not for a single day. The price for a reservation for a camping spot is 30 euro plus 20 euro for every guest.

During the event

At the entrance of the event there should be the possibility to check quickly if a visitor is allowed to enter the event. If the visitor did not pay or did not pay enough, he/she should get the possibility to pay. The payment, minus the entrance fee and minus 10 euro extra (to encourage paying in advance) is added to its event-account.

At the entrance of the camping area the system checks if the bill for the visitor's group is paid.

During the event it is not possible to pay cash: only by event-account.

On the terrain there are several stands where you can buy foods or drinks. For the pay desk we need an application to generate a sales receipt, check the unique identity number and lower the balance of the event-account of the visitor by the amount of the sales receipt.

Sometimes you want so badly join your friends at the event, you forget in a hurry some stuff (like a USB-cable, your camera, a charger for your laptop). There is a stand, where you can hire some material. Of course, you have to pay for it and, not surprisingly, we use your event-account to register the hired material and to pay for the rent.

It would be nice if the visitors of the event have the possibility to communicate about their experiences, so we would like to have something like Facebook, LinkedIn or Twitter. It should

be possible for visitors to place tweeds or something like that on the website. But placing tweets should only be possible for visitors.

At the end of the event

When a visitor leaves the event it must be possible to check the balance of its event-account. The fellow worker can return the money to the visitor and mark this event-account as not valid anymore. Do not forget to check if the visitor has hired some material but forgot to return it.

Always possible

The organisation made a deal with PayPal.

At certain moments PayPal will deliver a logfile (a textfile) to the organisation of the event with information about the deposits during the last period of time.

PayPal will place terminals on the terrain, so the visitor can transfer money from his/her bank account to his/her event-account. The software for the terminals will be delivered by PayPal.

It is your task to transfer the information in these text-files to the database. You can see an example of such a text-file in appendix B.

The organization should always have the possibility to see the status of the system, like:

- What is the current status of a certain visitor?
- The history of a certain visitor (like: did he pay the entrance price; for how much money did he order food; how much money in total did he transfer to his event-account?)
- How many visitors will visit the event?
- How many visitors are yet visiting the event?
- How many visitors have left the event?
- How much is the total balance of all event-accounts together?
- How much money did they pay in total?
- How much visitors booked a camping spot and for how much money?
- Which camping spots are free?
- For how much money did we sell in a certain shop?
- How many units of a certain article are sold?

Deliverables

- A name (and a logo) for your group.
- A project plan.
- Agenda's and minutes of every meeting.
- A setup-document (see appendix C).
- A website.

- A design for a database.
- An application to be used at the entrance of the event.
- An application to be used at the entrance of the camping.
- An application to be used at the shops.
- An application to be used at the stand, where you can loan materials.
- An application to be used when a visitor leaves the event.
- An application for the organization to inspect the status of the event.
- An application to convert the information in the PayPal-text-file to the database.
- A presentation about the project.
- A process report, (see appendix D).

Some requirements

1. The website should run on the Athena server of Fontys ICT. You should use html, css, JavaScript and/or php. First you make version 1 of the website. This is done in html and css. Later you have to deliver version 2, which has the possibility to make reservations. For this you need to use php.
   The last version (version 3) makes it possible to place tweets during the event.
2. The database could be an Oracle database or a MySQL database.
3. Windows applications should be programmed in an object oriented language, like C#, Java or C++. They should be object oriented as much as possible. Every class and every member of a class should be specified.
4. Every deliverable should have a first page. On this page should be the name of your group, the names of the group members, the title of the deliverable, the status and a version number.
5. **Every week** there is a meeting with the group members and the tutor. There should be an agenda and you should make minutes of every meeting. The agenda should be distributed at last one working day before the meeting. Minutes should be distributed al last one working day after the meeting.

Simple time schedule

Week 1 of first block:
Introduction. Visit the kick-off-meeting, read this paper and think of a name and logo for your group. Make a start with the project plan. Make a start with the setup-document. Prepare an interview with the client.

Week 2 to 7:
Finish the project plan (should be pretty concrete for the weeks in the first block and might be global for the weeks in the second block.

Investigate what kind of identification, like a barcode, QR-code or an arm brace with an RFID-chip, are suitable for this kind of project.
Work on website version 1.
Make a design for the database, choose which dbms to use (Oracle, MySQL?) and implement the database.
Make gui-designs for the applications. Describe the classes you will use.

Week 7: deliver a setup-document.

Week 8, 9: exam time.

Week 11 to 17 (second block):
Work on website version 2 and 3.
Eventually modify the database.
Work on the applications.

Week 18,19: exam time.

Week 19:
Deliver all deliverables.
Give a presentation for the colleague-students, the tutor and a representative of the company.

Appendix A: map of camping "Park Kuierpad".

Appendix B: About the logfiles, delivered by PayPal.

At certain moments PayPal will deliver a logfile to the organisation of the event with information about the deposits during the last period of time.
Every logfile contains information about deposits. The number of deposits is 1000 or less.

The structure of such a logfile is:

```
<<bank-account number of the organization>>
<<date and time of the start of this period>>
<<date and time of the end of this period>>
<<the number of deposits>>
<<information of a deposit: its unique identity number, a space an amount of money>>
<<information of a deposit: its unique identity number, a space an amount of money>>
. . .
. . .
. . .
<<information of a deposit: its unique identity number, a space an amount of money>>
```

An example of such a logfile is:

```
123456789
2012/02/03/16:13:03
2012/02/03/16:14:25
8
41356 25.00
345 60.00
73567 77.00
244 12.50
345 20.00
3966 20.00
61167 45.25
644 50.00
```

Appendix C: setup-document

In a setup-document you need to explain the processes, the requirements, the design of the website and applications. Further it should contain some decisions you made.

It should contain:

- Title page
    - Title, student names, group name or id, date
- Table of contents
- Preface
    - Short introduction of the document and a description of its chapters
- Client
    - Brief description of the client and the agreements with the client
- Processes
    - Description of the process of enquiring, enrolling, paying and actually visiting the event. Use an example e.g. some friends are interested in visiting a festival. They are using the internet to find such an event. Some enrol, some don't. At the event itself: they have to get in. Are they staying over? How do they….. etc etc.
    - Also be specific what should happen in exceptional cases e.g. somebody drops out, doesn't pay etc.
- Functional requirements
    - An overview of all requirements grouped by application.
    - Make a so called MoSCoW list to specify which requirements you're going to implement and which not.
- User interface
    - Brief description of the use interface.
    -

Appendix D: Process report

It should contain:

- Title page
    - Title, student names, group name or id, date

- Table of contents

- Preface
    - Short introduction of the document and a description of its chapters.
- For each week:
    - Planned activities
    - Performed actitivties
    - Completed activities
    - Agreements (violated?, changed?, new?)
    - Problems and challenges
    - Solutions and decisions
    - Extra achieved / completed
    - Table with activities and hours spend per group member
- For every group member: An individual reflection (what did you learn? Why is it a good or bad project for you? What would you do better next project?)

- Appendix A: Agendas en minutes, Action lists

- Appendix B: Project plan

- Appendix C: Peer-reviews

- Appendix D: Report of the interview with the client

- Appendix E: Hours worked overview per group member

Appendix E: Group work!

One of the most important skills you'll have to master during your study at Fontys University ICT College is to collaborate, work together in a group. In this appendix you'll find some tips regarding working in a project group. Read this information carefully in the first week of your project and check regularly during the rest of the semester if you're really functioning as a group member.

You'll have to learn that you can achieve more as a group then alone. But collaboration will not come naturally! You'll have to make agreements with your group members and respect each other.

Preparation

Divide the different rolls and tasks and make a time schedule. Try to finish this in week 1, and deliver to your tutor!

- Who is the chairman at the meetings?
- Who takes notes/minutes?
- Who monitors the schedule (process)?
- Make a division of tasks with deadlines.
- Agree on communication within the group.
- Agree on a how you going to make decisions in the group
- Make a schedule!

Working…..

- Honour all agreements you made!
- Make sure you have (and keep) the same view on what and how to do your tasks.
- Be a responsible group member: You are responsible for your task!
- The burden of the end responsibility is for the whole group.
- Make sure you communicate! Keep each other informed.
- Give feedback to each other so you can improve.
- When giving feedback on a product you're evaluating the product not the person himself.
- Ask feedback of your tutor in case you are stuck in the project for whatever reason

Communication

- Listen to each other
    - Do not interrupt: let people finish their talk
    - If you don't understand then ask for clarification: Who, what, where, how…
    - Take each other's feelings into consideration

- Give proper feedback
    - Use constructive criticism
    - Only give feedback with the intention of improving
    - Be specific.
    - Respect ones opinion and be polite!

- Receiving feedback
    - Do not hide in defence but try to reflect and use it for the better
    - Ask for clarification if necessary
    - Respect ones opinion and be polite!

- Difference of opinion
    - Talk! With respect for each other's opinion.
    - Investigate the matter: start with your common goal and subjects you do agree upon.
    - Ask your tutor to mediate.

Roles within a project group

Below you'll find a list of possible roles with their tasks.

- Project leader
    - The initiator of the project
    - Has an overview, actual status of the project
    - Divides the tasks among the group members
    - Makes sure everybody understands what to do
    - Checks progress
    - If necessary adjusts the schedule
    - First contact to the client

- Secretary
    - Responsible for the process report
    - Arranges appointments
    - Makes note of agreements
    - Responsible for all project documentation
    - Together with the project leader responsible for the weekly agenda and minutes
    - Keeps all group members hours worked overview

- Quality manager
    - Responsible for the quality of the code and comments
    - Responsible for the designs

- o   Agrees upon an style of coding and guards that
- o   Guards the consistency between design and implementation
- o   Implements a VCS preferably in svn or Git
- o   Guards the requirements and their implementation

- Chairman
- Minute taker

What to expect of the tutor (Coach)?
- Supporting your group in any question you have
- Time needed, if requested in a fair time to respond
- Review documents and products in progress
- For feedback at any time you need it
- Objective feedback from coach initiated by the coach at any time
- Support in case of issues or any other problems

Success to all!!!