



PROJECT PLAN DOCUMENT

Software solution for “Media Bazaar”

Group 1

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Fontys ICT

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Introduction

The company Media Bazaar is planning to open their very first shop in Eindhoven. Administration is struggling with management of the company. The biggest challenge that Media Bazaar's management foresees is keeping track of their employees, products, work shift scheduling and department management. Receiving a structured statistical information.

As a team of 4 members, we will work to deliver a working application that will help the company fix its problems.

Client

Our client is Andre Postma, a representative for the hardware store "Media Bazaar", funded by the parent company "Jupiter". The company needs an effective solution to manage employees and stock, view statistics, give access to certain data and features after authorization as well as to be expandable with additional features in the future if this first phase is considered a success.

Client: Andre Postma, manager at Media Bazaar

Email client : a.postma@fontys.nl

Team

Teammate	Number	Role	Email
Andrei Sava	4229258	Developer/ Designer	a.sava@student.fontys.nl
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Current situation

“Media Bazaar” is a new hardware store, funded by “Jupiter”, is opening their first store located in Eindhoven and they intend to be as prepared as possible. Their management foresees keeping track of employees and products as their biggest challenge.

Currently several disconnected solutions are being used, such as Excel sheets, papers etc. which would not be sufficient for the new store.

Therefore, they want to hire a team of software developers to develop an administrative system that allows its users to manage and keep track of

employees and products.

The best possible way of developing this administrative system is to make sure managers and administrators make use of a Windows application to keep track of the employees and assign shifts.

For the employee side, it would be best to develop a website where each employee can login in and check announcements and, of course, their schedule with a weekly view.

The system is intended to be used by company management, administration, and employees.

There are competitors working on the similar solutions.

Problem description

The client has a problem with the data management. “Media Bazaar” does not have an information system to manage their business processes neither a structured and organized approach of collecting and keeping statistical data.

Project goal

Waterfall phase:

The goal of this project is to improve the efficiency and productivity of “Media Bazaar’s” management and administration staff by creating, testing, and deploying a desktop application within the first phase, called Waterfall phase, which lasts 6 weeks.

Academic goal is to extend team knowledge and acquire practical experience with software development.

Iterative phase:

During this phase we are going to work according to the iterative model which consists of four iterations, each of them will be described accordingly.

Iteration 1:

The goal of this phase is to give employees a portal where they can see their schedule and manage personal information.

Academic goal is to study another project methodology, find benefits and weaknesses of the new approach. Team is supposed to improve

theoretical knowledge, apply it on practice and acquire professional communication skills while working in the team.

Iteration 2:

The goal of this phase is to arrange communication between depot workers, cashiers, and administration via information system, particularly with windows application and aid in product management.

Academic goal is to broaden technical knowledge and further develop communication/writing skills.

Iteration 3:

The goal of this phase is to extend the departments the administration being the one's responsible. For the calendar, an automatic scheduling system will be created for admins to assign work shifts for employees. Also, managers, should have a deeper overview of statistics about employees, products, and departments. Furthermore, based on a selected department, an overview and some statistics will be shown to the manager. Employees must be able to check-in and check-out within the website, both admins and managers being kept up to date.

Academic goal is to improve our current technology and continue developing our communication/writing skills while working as a team.

Deliverables for Waterfall Phase

The team will deliver the following:

1. A desktop application that meets the client's requirements: keeping track of their employees, products, work shift scheduling and department management, collecting a statistical information.
2. Project plan describing how the 6 weeks of time will be used
3. URS document with functional requirements, wireframes etc.
4. Presentation and demo at the end of the 6 weeks (week 6 being 22nd-26th March)

Deliverables for Iteration Phase

Iteration 1:

The team will deliver the following:

1. A website that meets the client's requirements:
 - Website for employees
 - Employees must be able to:
 - a. see some of their data
 - b. edit some of their data
 - Announcements and news for employees
 - Employees on permanent contracts can indicate up to two days during which they are not available
 - Contact form for employees to their managers
 - Future auto and manual scheduling algorithm should take in consideration employee's preferences
 - Avoid auto-removal in schedule
 - Finish before week 9 (12th-16th April)

Iteration 2 (Due May 9th):

1. Windows application according to user requirements.
 - a. Installer.
2. Web-application for employees according to user requirements.
 - a. Link.
3. Documentation.
 - a. Project plan.
 - b. URS.
 - c. Wireframes.
 - d. Peer review forms

Iteration 3 (Due June 6th):

1. Windows application according to user requirements.
 - a. Installer.
2. Web-application for employees according to user requirements.
 - a. Link.
3. Documentation.
 - a. Project plan.
 - b. URS.
 - c. Wireframes.
 - d. Technical peer review forms

Iteration 4 (Due June 20th):

1. Windows application according to user requirements.
 - a. Installer.
2. Web-application for employees according to user requirements.
 - a. Link.
3. Documentation.
 - a. Project plan.
 - b. URS.
 - c. Wireframes.
 - d. Peer review forms

Non-deliverables

The team will not deliver the following:

1. Workshops on working with software for staff.
2. Any kind of hardware

Constraints

Constraint	Description
Fixed deadline	Everything we have agreed to deliver to the client must be completed before the deadline in week 17 (June 6th) up to and including iteration 3
Software tools	The website must be built using HTML, CSS, PHP, JavaScript The application will be built with C# programming language.
Methodology constraints	By using the Iterative methodology for this phase, we assume that the requirements may change at any time. Every iteration adds requirements to the already existing ones. Every iteration will represent a certain (set of) feature(s). In the end, the result may be different from what we started with initially

Risks

Risk	Description	Impact	Mitigation strategy
Teammate dropping out	A teammate leaves the team due to dropping out of university	HIGH	Frequent communication to be informed as early as possible and re-distribute tasks
Project scope and purpose not defined clearly enough	During the information gathering phase, the requirements are not fully understood	HIGH	Clear client communication with detailed question, no assumptions and making sure all teammates are well informed about every project aspect
Technology change	The underlying technology on which the system is built is superseded by new technology	LOW	Avoiding the use of third-party extension and libraries which might not be useable after updates related to C# and the .NET Framework

Time	Running out of time due to unforeseen circumstances	HIGH	Contact client and tutor as soon as possible to describe situation and adjust requirements
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Communication plan

To ensure proper communication, clearly understood requirements and quick reaction time in cases of unforeseen circumstances the team communicates on Discord daily, alongside the weekly meetings with the tutor. Also, an informal meeting is held at the start of the week (Monday or Tuesday) to distribute the tasks for the week.

Communication with client:

During the Waterfall phase we will initially meet the client to gather all the needed information via MS Teams, use emails if any questions arise and to send deliverables before final presentation (such as documentation, agendas, minutes etc.)

The approach which will be used during the Iterative Phase consists of weekly tutor meetings via MS Teams and every three weeks a meeting with the client via MS Teams as well. Further communication if needed will be conducted via email or extra meetings in MS Teams. At the end of every three-week period the client will be presented with an application(s) that meets their requirements for that particular sprint.

Phasing

Waterfall phase:

1) Phase 1.1: Project analysis

Activities:

- i) Analyze client's problem.
- ii) Analyze current approach of dealing with the problem.
- iii) Work out the effective solution for the problem.

Deliverables:

- i) Project plan.

Description: In this phase team is focused on analyzing reasons and consequences of the current problem. Conducting the applied research and preparing the possible solution that fits with existing business processes is main priority.

Milestone: Project approval.

Due: February 28th.

2) Phase 1.2: Design

Activities:

- i) Design software architecture.
- ii) Make UML class diagram.
- iii) Design a GUI wireframes.
- iv) User Requirements Specification.

Deliverables:

User Requirements Specification.

Description: In this phase team designs and implements the solution. This includes design of the software architecture and data model design. Main priority in this phase is to strictly follow the targets set in the previous phase while working on the solution.

Milestone: Design approval.

Due: March 7th.

3) Phase 1.3: Implementation

Activities:

- i) Implement solution based on UML class diagram
- ii
-) Create GUI based on design.

Deliverables:

- i) Interim version of the solution.

Description: In this phase team designs and implements the solution. This includes implementation of the software architecture and data model design. Main priority in this phase is to strictly follow the targets set in the previous phase while working on the solution.

Milestone: Interim approval.

Due: March 14th.

4) Phase 1.4: Testing

Activities:

- i) Create test plan.
- ii) Test the software.
- iii) Improve the software based on feedback.
- iv) Create test report.

Deliverables:

- i) Test report.

Description: In this phase software test are done. Team works on improvements based on feedback. Main priority in this phase is the reliability of the software.

Milestone: Pre-final approval.

Due: March 21st.

5) Phase 1.5: Presenting

Activities:

- i) Deliver final version of the application to the client.
- ii) Present the solution.

Deliverables:

- i) Software application.
- j) Presentation of the product.

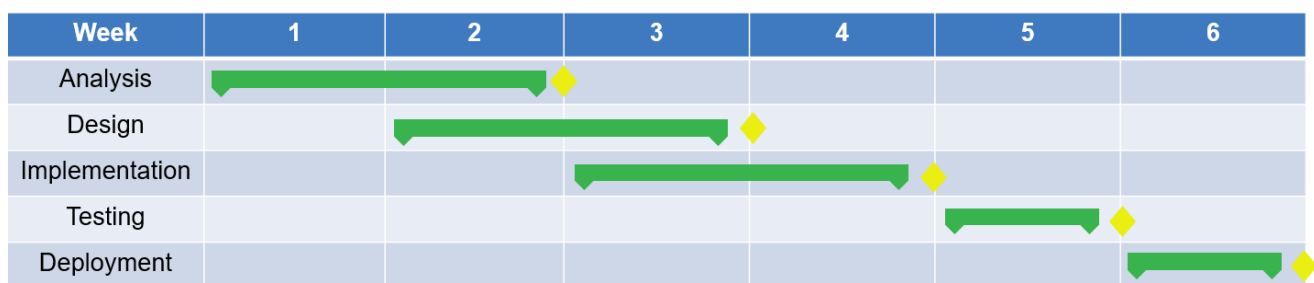
Description: In this phase team deliver the release version of the software solution to the client. Team presents the product. Main

priority is to correctly present the product to the client.

Milestone: Final approval.

Due: March 25th.

Gantt table



Iterative phase. Iteration 1:

During this iteration, the team is going to build a website for Media Bazaar's employees where they can log in, view announcements, view their schedule, edit personal details, and contact the admin if they can't attend work on a specific day.

1) Phase 2.1.1: Analysis

Activities:

- i) Update project plan.
- ii) Update User Requirements Specification.

Deliverables:

- i) User Requirements Specification.
- ii) Project plan.

Description: In this phase team does analysis. Team works on possible solution and updates required project documentation. The main focus is

on improving of documentation.

Milestone: Documentation approval.

Due: April 4th.

Phase 2.1.2: Design.

Activities:

- i) Design GUI wireframes.
- ii) Add wireframes to use cases in URS.

Deliverables:

- i) GUI wireframes.

Description: In this phase team designs GUI wireframes. Team adds them to use cases. Focus is on usability heuristics and particularly user-friendly design.

Milestone: Design approval.

Due: April 4th.

Phase 2.1.3: Development.

Activities:

- i) Extend database.
- ii) Implement website.
- iii) Publish website on webserver,

Deliverables:

- i) Solution's code.
- ii) Database.
- iii) Website's URL.

Description: In this phase team implements the solution. Team updates database and implements the solution based on agreements made with client. Main priority is effective communication in a team.

Milestone: Interim approval.

Due: April 11th.

Phase 2.1.4: Testing.

Activities:

- i) Continue working on development.
- ii) Test solution.
- iii) Present solution to the tutor.

Deliverables:

- i) Solution's code.
- ii) Process peer review.

Description: In this phase team continues working on solution. Team tests the solution and presents it to the tutor. Team makes process peer review.

Milestone: Final approval.

Due: April 18th.

Iteration 2:

During this iteration, the team is going to extend the application, by adding the possibility to view, add, edit, and delete products. Also, product requests are going to be implemented in case a product stock goes below a certain threshold. Product statistics are going to be added in the “Manager” side. New “Cashier” and “Depot worker” are going to be added.

1) Phase 2.2.1: Analysis

Activities:

- i) Update project plan.
- ii) Update User Requirements Specification.

Deliverables:

- i) User Requirements Specification.
- ii) Project plan.

Description: In this phase team does analysis. Team works on possible

solution and updates required project documentation. Focus is on improving of documentation.

Milestone: Documentation approval.

Due: April 25th.

Phase 2.2.2: Design.

Activities:

- i) Design GUI wireframes.
- ii) Add wireframes to use cases in URS.

Deliverables:

- ii) GUI wireframes.

Description: In this phase team designs GUI wireframes. Team adds them to use cases. Focus is on usability heuristics and particularly user-friendly design.

Milestone: Design approval.

Due: April 25th.

Phase 2.2.3: Development.

Activities:

- i) Extend database.
- ii) Extend application.
- iii) Publish application.

Deliverables:

- i) Solution's code.
- ii) Database.
- iii) Website's URL.
- iv) Windows application installer.

Description: In this phase team implements the solution. Team updates database and implements the solution based on agreements made with client. Main priority is effective communication in a team.

Milestone: Interim approval.

Due: May 9th.

Phase 2.2.4: Presentation.

Activities:

- i) Present solution.

Deliverables:

- i) Process report.

Description: In this phase team present solution to the client, tutor and audience. Main priority is explainable presentation design.

Milestone: Final approval.

Due: May 11th.

Iteration 3:

During this iteration, the team is going to extend both application and website. For the application, a new tab called “Departments” is going to be added where the admin can view, add, edit, and delete departments. Also, for the “Calendar” an auto-schedule feature will be added where the admin can schedule multiple employees for a specific period. Related to the “Manager” side, statistics based a selected department and attendance for employees are going to be added. The website is going to feature a “Attendance” navigation bar item, where employees can “Check-in” and “Check-out” if they have a shift and see on which day and time their current shift is going to start.

1) Phase 2.3.1: Analysis

Activities:

- i) Update project plan.
- ii) Update User Requirements Specification.

Deliverables:

- i) User Requirements Specification.
- ii) Project plan.

Description: In this phase team does analysis. Team works on possible solution and updates required project documentation. Focus is on improving of documentation.

Milestone: Documentation approval.

Due: 26th May.

Phase 2.3.2: Design.

Activities:

- i) Design GUI wireframes.
- ii) Add wireframes to use cases in URS.

Deliverables:

- iii) GUI wireframes.

Description: In this phase team designs GUI wireframes. Team adds them to use cases. Focus is on usability heuristics and particularly user-friendly design.

Milestone: Design approval.

Due: 6th June.

Phase 2.3.3: Development.

Activities:

- i) Extend database.
- ii) Extend application.
- iii) Publish application.

Deliverables:

- i) Solution's code.
- ii) Database.
- iii) Website's URL.
- iv) Windows application installer.

Description: In this phase team implements the solution. Team updates database and implements the solution based on agreements made with

client. Main priority is effective communication in a team.

Milestone: Interim approval.

Due: 6th June.

Phase 2.3.4: Presentation.

Activities:

- i) Present solution.

Deliverables:

- i) Process report.

Description: In this phase team present solution to the client, tutor, and audience. Main priority is explainable presentation design.

Milestone: Final approval.

Due: 6th June.

Iteration 4:

During this iteration, the team is going to extend both application and website. For the application, a new type of user (Department Manager), who is an employee, and a form for this kind of user, are going to be added. Department Manager should be able to view the employees working within his/her department, and the statistics for his/her department. It should not be possible for the admin to change the department of the employee assigned as Department Manager. Also, if the admin decides to change the Department Manager, the status of Department Manager of the respective employee will be revoked.

Regarding the website, a “Call sick” button is going to be implemented. This is going to send a notification to the admin letting him/her know that the respective employee will not be able to attend work that day. Sending an optional message is also possible.

1) Phase 2.4.1: Analysis

Activities:

- i) Update project plan.
- ii) Update User Requirements Specification.

Deliverables:

- i) User Requirements Specification.
- ii) Project plan.

Description: In this phase team does analysis. Team works on possible solution and updates required project documentation. Focus is on improving of documentation.

Milestone: Final version of documentation finished.

Due: 20th June.

Phase 2.4.2: Design.

Activities:

- i) Design GUI wireframes.
- ii) Add wireframes to use cases in URS.

Deliverables:

- i) GUI wireframes.

Description: In this phase team designs GUI wireframes. Team adds them to use cases. Focus is on usability heuristics and particularly user-friendly design.

Milestone: Final version of design finished.

Due: 20th June.

Phase 2.4.3: Development.

Activities:

- i) Extend database.
- ii) Extend application.
- iii) Publish application.

Deliverables:

- i) Solution's code.
- ii) Database.
- iii) Website's URL.
- iv) Windows application installer.

Description: In this phase team implements the solution. Team updates database and implements the solution based on agreements made with client. Main priority is effective communication in a team.

Milestone: Interim approval.

Due: 20th June.

Phase 2.4.4: Presentation.

Activities:

- i) Present solution.

Deliverables:

- i) Process report.

Description: In this phase team present solution to the client, tutor, and audience. Main priority is explainable presentation design.

Milestone: Final approval.

Due: 20th June.

Revision history

Project plan version 0.1 - 22/02/2021

Editing by Stelian based on feedback from tutor meeting (23/02/2021) - 25/02/2021

Project plan version 0.2 - 26/02/2021

Edited by Bohdan. Styled the document and small changes – 26/02/2021

Project plan version 0.3 – 28/02/2021

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Project plan version 0.4 – 01/03/2021

Edited by Stelian. Based on feedback from tutor and client from 01/03/2021

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Edited by Bohdan. Changes in sections: Deliverables, Non-Deliverables, Project Goal.

Project plan version 1.0 – 03/04/2021

Edited by Andrei. Update for Iterative Phase.

Project plan version 1.1 – 04/04/2021

Edited by Bohdan. Added phasing and minor changes.

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Edited by Andreea. Updated based on tutor's feedback.

Project plan version 1.8 – 16/06/2021

Edited by Andreea. Updated for iteration 4.