



SYSTEMAT.

Process Report

S2 - CB03 Group 7

Students: Antonio, Erik, Noah, Konstantin

Tutor: Vucht Mieke

Table of Content:

A. Introduction	2
B. Work Division	3
C. Applying Waterfall	4
D. Reflections	5

A. Introduction

Media Bazaar, a child company of Jupiter Inc., is looking to expand its self within Eindhoven. By offering a wide range of consumer electronics products to consumers, Media Bazaar is facing numerous challenges, namely employee and inventory management. Luckily, such problems can be resolved with the use of software tools. By reaching out to Systemat., they have laid their problem and it was up to us to analyze, develop and deploy a product that works for their best interests.

Over the course of six weeks, we have undergone a progressive development using the Waterfall approach. From our problem analysis (and project requirements), we have developed a website and an application, *MediaBazaarApp*, that would allow them to complete a wide range of tasks, such as viewing inventory, making orders, changing employee data, etc. Furthermore, since Media Bazaar is a newly established company within Eindhoven, it was important for our product to be scalable: as they increase store and office locations, so will the challenges in keeping everything in order. That is why *MediaBazaarApp* include features such as adding new store location, transferring employees to different locations and managing inventory on both a macro and micro scale.

B. Work Division

Through this project, we have divided the work in a way that works best for us. Some of new HTML better than others, others new server management more than others and so we have divided the work as follows:

Part	Included
Deign Decisions	Full Team
App Wireframe	Noah
Web Wireframe	Konstantin, Antonio
App GUI	Konstantin, Antonio, Noah
• Account Tab	Antonio
• Dashboard Tab	Antonio
• Location Tab	Konstantin
• Inventory Tab	Noah
• Announcement Tab	Announcement
App Functionalities	Noah
Web GUI	Erik, Antonio, Konstantin
• Account Tab	Erik, Konstantin
• Dashboard Tab	Erik
• Inventory Tab	Erik, Antonio
Web Functionalities	Erik
Database Design / Development	Noah
Project Plan (before/after feedback)	Full Team
URS Analysis	Full Team
URS Document	Erik, Noah

NOTE: We have contributed to the Database, C# App, and Website to some degree, we have all learned things from the areas we lacked knowledge on.

D. Applying Waterfall

Applying the Waterfall method within our project has played a paramount role for this project. Throughout the project, we were able to work as a team in developing a proper solution for our client and its effectiveness comes from many reasons. The Waterfall method provides a logical sequence of steps to follow chronologically and has had a veritable impact on our development process:

Analysis - For the first step, we delivered our final Project Plan. We spend time analysis and understanding the problem and the client's needs and by doing this we had laid the tracks to follow in order to develop the product envisioned for the weeks to come. We had also worked on a URS document which included all basic user requirements for both the C# app and the website that we have identified to solve Media Bazaar's problems.

Design - Making designs and wireframes for the app and website was the next step. Now that we have identified all the features, it was time to put them into shape in a reasoned way. We had multiple meetings where we discussed all of our thoughts and worked on one solution that incorporated all of ideas into one, literally. We had different ideas for the website and the app but we settled on having the same design for both the website and the app; we value consistency and ease of use. We knew that overtime our perception of the solution might alter drastically and to remedy we have designed a fully detailed wireframe using Adobe XD which can be accessed at any time online.

Implementation - Once we had a design, it was time for implementation. Predictably, this was the longest phase for us. Since we have envisioned a wide range of features, we were all able to work simultaneously on the app and using Adobe XD, we were all able to each work individually in making the UI interactive. We had also spent time experimenting (e.g creating a pdf report system or an emailing system).

Testing - Now that we had a fully functional application, we had to know how well it would perform with a user and, by following the Waterfall method, we had develop a test plan for Group 5. Throughout this project, we have changed the UI in order to organize the application in a way that makes more sense and that is easier to use.

C. Reflections

Antonio - The Media Bazaar project has been an important one. During development we learned a lot of new things about teamwork, time management and persuasiveness. We managed to pull this project to a next level in terms of designing and functionalities. Everybody had his own part of the work and I believe we managed to synchronize the documentation with the implementation perfectly. I'm flattered to be a part of this team and therefore glad we've accomplished so much through good communication and teamwork.

Erik - During the project time, my individual progress has been in terms of working with new features of C#, and with php/javascript for the website. I've also learned about teamwork from working with a new team and how to work professionally, but also how I should still improve on this. Over the middle of the project my contribution to the work was lacking which I have now compensated for with my work on the website.

Learning Goals:

- Teamwork Skills
- Professional Skills
- C#, PHP/JS

Lessons during this project should lead me to better teamwork and communication on work division. Improve on being strict with professional work and documentation.

Noah - This project, like the previous one, has gave me a lot of insight on team work and coding in C# overall. From my project, I have taken the time to develop a small tool that would allow us to very quickly generate and manipulate any type of data in large quantities. Another thing that was very useful was to create classes for each table within the DB (e.g. an 'Employee' & 'EmployeeCollection' class for the employee table). One of the thing that was lacked consistency were the minute-meetings and meeting with my mentor on time. For this project, we have dedicated one person to be fully in charge of scheduling meetings which has proven to be very effective in my opinion; we were almost always able to meet

and convey our progress. This project, however, also had critical points that I would have done differently. As communicated by my team mates, the classes I have made were sometimes hard to understand as they were quite long. I should have made more formal UML Diagrams for my team mates to better understand how things worked. One of the things I would have definitively done differently however is worked more on the website then on the application. Nevertheless, this project lead the me to the realization that a project like this is good for learning with a more hands-on experience but that the combination of projects helps paint bigger picture of what a Software Engineer is truly about.

Konstantin - Personally, I contributed to the project by working on the GUI part, and I paid more attention to create a professional design that would contain all the necessary information for the Media Bazar App (buttons, tabs, forms and stuff.). In addition, with the help of others we made the wireframe for the website and also for the c# application. So each of us could work more freely on the project and also to make it easier to update the changes that the other person of the project has done. We also made use of GIT which made our work even more easier. My job also included debugging some code errors. Another thing was the dashboard of the website which includes calendar. The hardest part for me was to implement the code for PHP. For the finale, We received a working application that I think could really help Media Bazar shops in real life