Internship

Plan of action

Internship ITFactory

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1 INTERNSHIP COMPANY

The internship was placed in the Saint-Dimpna hospital in Geel. In the hospital they treat from urgent cases to physical rehabilitation. I got placed in the IT department but there are different kinds of departments like the administrative department, nursing department, … . In total there are more than 1200 employees and 7 of those people are on the IT department.

The IT department, a very important department where people can call to if they have a IT issue. There are 2 kinds of people in the IT department. There is one developer, six system administrators and one person for the helpdesk.

2 ASSIGNMENT(S)

2.1 ECONOMATLABELS

2.1.1 Motivation and background

2.1.1.1 Situation BEFORE the realization

To re-order products, there are labels with barcodes that are scanned and automatically ordered in SAP by a custom application. The info that needs to be on the label is entered manually from SAP into a Excel and then through the custom software printed one by one. The printing function is quite a process. The info from Excel is entered with an application into a Word document using mail references and this document gets saved in a folder on a server. Then another application sees this file and prints it as soon as it appears in the folder it is watching 24/7.

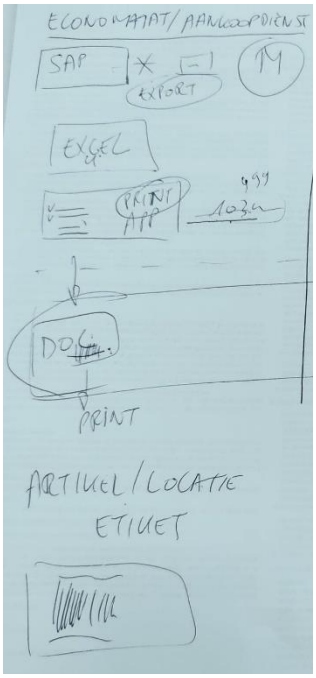

Figure 1: old way of printing

2.1.1.2 What is going wrong or less efficient

Currently there are 3 different applications that are used to print a single label. Then there is the other issue that the Word process sometimes keeps running even if it's closed. After a while the system just crashes because there is a lot of processes running.

2.1.1.3 What can be improved

Ideally, only 1 application would be needed instead of 3. Avoiding Word would be a big plus so there would be no more processes sneaking around.

2.1.2 Goal

2.1.2.1 Final Product

Transforming an existing application so that it no longer requires Word to print a label with information and a Barcode.

2.1.2.2 What needs to be in it

The label needs to have a barcode and there needs to be a new way of printing the label.

2.1.3 Business Case

2.1.3.1 Why

There are way too much things that can go wrong in the current process.

2.1.3.2 For who

This application will be used by the employees of the warehouse

2.1.3.3 Utility / benefit to the organization

There will be less application running on the server and the process to print a label will be a lot more stable.

2.2 EMERGENCYLABELS

2.2.1 Motivation and background

2.2.1.1 Situation BEFORE the realization

When a patient arrives at the ER, this data is entered into an external application called ChipSoft/HiX. This application send the data to a web application which then requests more data and creates a text file. This text file contains a name, date of birth and possibly administered medication. As soon as an application sees that the text file is in a folder, the information from that file will be filled into a Word template using mail references. Afterwards this Word document will be printed just like the EconomaticLabels.

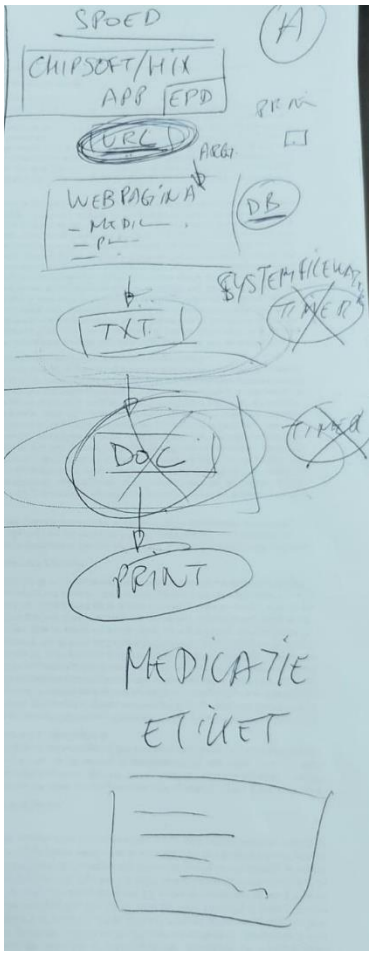

Figure 2: old way of printing

2.2.1.2 What is going wrong or less efficient

Like already mentioned before, Word does not always close the running process correctly and that leads to a lot of running Word processes and eventually to a system shutdown. There are also three applications that need to do something before the label comes out of the printer.

2.2.1.3 What can be improved

We need to minimize the number of application and try not to use Word for the print process.

2.2.2 Goal

2.2.2.1 Final product

Transform the existing applications so there is no need for Word or the text file anymore to get to a printed label.

2.2.2.2 What needs to be in it

The information of the patient needs to be on the label and a way to simplify the print process.

2.2.3 Business Case

2.2.3.1 Why

One of the three applications needed to get one label can fail and then the whole process needs to start again. The printing process can be simplified so there are no applications needed for watching directory's for files.

2.2.3.2 For who

This application will be used by the employees of the emergency department, so they can stick a label on the administered medication because this is mandatory by the Belgium government.

2.2.3.3 Utility / benefit to the organization

There will be less application running on the systems and the printing process will once again be more stable

2.3 SPOOLREGISTRATION

2.3.1 Motivation and background

2.3.1.1 Situation BEFORE the realization

At the moment, everything gets noted on paper. Afterwards all this "data" gets collected and will be entered manually into a Excel sheet.

2.3.1.2 What is going wrong or less efficient

Because of all the different papers, the time spent on filling in the data is too much. All the data needs to be filled in manually. This is just a waste of time which uses a lot of paper.

2.3.1.3 What can be improved

The time that gets spent to fill in the Excel sheet and the way the data gets collected.

2.3.2 Goal

2.3.2.1 Final product

A Windows forms application where the employees can check off if the items in a room that their shift needs to clean. Because the cleaning team does not have access to a portable computer they can't use the application. For this reason we also have to create a web page, so they can use their tablets or phones to check off the items they cleaned.

2.3.2.2 What needs to be in it

- Configuration screens
    - There needs to be a screen where you can list and manage all the rooms. There needs to be a way to filter on all kinds of properties. For example: the room name, location, or shift.
    - If a room gets chosen a detailed screen about that room needs to be showed. In this screen you can add, edit or remove an item with a shift. You can also change the room name and the location of the room.
    - Every input field needs a validation to check it meets the minimum requirements.
- Data-In screens
    - With the help of Active-Directory, the application knows which user is logged on and which shifts they are connected

to. If there is no AD-group connected to the user, the default group will be the cleaning team.
    - Because of the chosen shift, there will be made up a drop down list with the rooms that need to be cleaned.
    - There needs to be a way to check off an item that is clean.
- Data-out screen
    - There needs to be a possibility to export the data to a Excel. With the use of filters the user can specify what will be exported.

2.3.2.3 Properties of the result

- The main application will be made out of Windows forms
- The data in screen also needs to be accessible from the web.

Both the application and the webpage needs to have a Windows look and feel that is very user-friendly.

2.3.3 Business case

2.3.3.1 Why

Making this process digitally will save a lot of paper but it will also save a lot of time for the employees. Everything is kept at one central point. There will be a big difference in time spent on this task. It is cleaner and faster to get a view on how clean the hospital is.

2.3.3.2 For whom

The application is mainly going to be used by the cleaning team. The nurses and the technical department will also use the application when they need to clean something. An employee with a higher function will be able to configure all the rooms, items and which shift needs to do it. They will also have access to the export screens, so they can create a Excel.

2.3.3.3 Utility / benefit to the organization

- The employees will spend way less time on these manual tasks
- Easier to see what items need cleaning
- Easier to get a view on how clean the hospital is.

3 PLANNING

3.1 INITIATION PHASE

In this phase I learned to know the company, How they work, with what they work. In this phase I also looked on how I needed to handle the rest of the internship

3.1.1 Step-by-step plan

The assignment could be split up into different pieces. The company uses a 3-tier structure.

Step 0: Prepare the database. Get all the columns and tables that will be needed in the application.

Delivery: A SQL script that can be executed so the database is set up correctly.

Step 1: Configuration

Delivery: A Windows form application where employees can configure rooms, items, locations and shifts

Step 2: Data-In

Delivery: A Windows form application where employees can fill in if they cleaned an item in a specific room on a date.

Step 3: Data-Out

Delivery: A screen in the Windows Forms application where the selected data can be exported to a Excel file.

3.2 REALIZATION PHASE

During the realization phase, there will actually be worked on creating the application of the assignments. If the assigned assignments are completed, there might be some extra projects I can help with or even start.

4 RISK ANALYSIS AND PROJECT DELINEATION

4.1 PERSONAL INFORMATION

If any of the assignments I made contained personal information of a person, ranging from employees to patients may be used in any documents with the condition that the person in question is not recognizable

Information like names, dates of birth and if needed the administered medication will be blacked out.

Using screenshots of any written code or results from the assignments are allowed to be used in any of the documents.

5 INFORMATION GATHERING AND REPORTING

5.1 KEEPING GUIDANCE INFORMED

5.1.1 Internship supervisor

I had foreseen a Word document in Microsoft OneDrive that has been shared with the supervisor of my Internship. In this document she could see daily updates of what was done that day, what was difficult and if I resolved it or not.

5.1.2 Internship mentor

There was a Excel document which the mentor could open at any time. In this document he could see what I planned on doing or what I have done on a specific day. There was a column where he could see the estimated time and the actual time spent on that topic.

5.2 REGULAR / STRUCTURED FOLLOW UP

Since we were in the same office every day, we didn't have much meetings. Sometimes we discussed something about the application if someone wants a change or if something different than planned needs to be done.

If there was a feeling that there needed to be a meeting, we planned a SCRUM-meeting.

If the mentor was not physically available, I could always use teams or email the mentor if I needed him.