



# **Internship**

## Plan of action

### **Internship ITFactory**

**Ruben Boone 3APP02**

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Campus Geel, Kleinhoefstraat 4, BE-2440 Geel

## TABLE OF CONTENTS

<b>1</b>	<b>INTERNSHIP COMPANY .....</b>	<b>4</b>
<b>2</b>	<b>ASSIGNMENT(S) .....</b>	<b>5</b>
<b>2.1</b>	<b>EconomatLabels .....</b>	<b>5</b>
2.1.1	Motivation and background.....	5
2.1.2	Goal.....	5
2.1.3	Business Case.....	6
<b>2.2</b>	<b>EmergencyLabels.....</b>	<b>6</b>
2.2.1	Motivation and background.....	6
2.2.2	Goal.....	6
2.2.3	Business Case.....	7
<b>2.3</b>	<b>SpoolRegistration .....</b>	<b>7</b>
2.3.1	Motivation and background.....	7
2.3.2	Goal.....	8
2.3.3	Business case .....	9
<b>3</b>	<b>PLANNING.....</b>	<b>10</b>
<b>3.1</b>	<b>Initiation phase.....</b>	<b>10</b>
3.1.1	Step-by-step plan .....	10
<b>3.2</b>	<b>Realization phase .....</b>	<b>10</b>
<b>4</b>	<b>RISK ANALYSIS AND PROJECT DELINEATION.....</b>	<b>11</b>
<b>4.1</b>	<b>Personal information .....</b>	<b>11</b>
<b>5</b>	<b>INFORMATION GATHERING AND REPORTING.....</b>	<b>12</b>
<b>5.1</b>	<b>Keeping guidance informed.....</b>	<b>12</b>
5.1.1	Internship supervisor .....	12
5.1.2	Internship mentor.....	12
<b>5.2</b>	<b>Regular / Structured follow up.....</b>	<b>12</b>

## **1 INTERNSHIP COMPANY**

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

My internship went down at 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. The developer and the system administrators.

## 2 ASSIGNMENT(S)

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### 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 process 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.

##### 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 the name, birth date 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.

#### **2.2.1.2      *What is going wrong or less efficient***

Just like with the EconomaticLabels does Word not kill the process correctly which leads to the system eventually crashing. Also all the steps from that print process are applied in this case.

#### **2.2.1.3      *What can be improved***

We need to minimize the number of application and try to not 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***

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

### **2.2.3 Business Case**

#### **2.2.3.1      *Why***

There is again, too much that can go wrong in the current process

#### **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 required 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 used 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 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 webpage, 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 choices shift, there can be made up a drop down list with the rooms that need cleaning
  - There needs to be a way to check off an item that is cleaned.
- 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 spare a lot of paper but it will also spare 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 who***

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**

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### **3.1 INITIATION PHASE**

In this phase I will learn to know the company, How they work, with what they work. In this phase I will also look on how I will handle the rest of the internship

#### **3.1.1 Step-by-step plan**

The assignment can 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 form 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**

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### **4.1 PERSONAL INFORMATION**

In every assignment that is being created that includes personal information of a person, ranging from employee or patient can be used in any documents with the condition that the person in question is made unrecognizable.

Information like names, birth dates 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**

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### **5.1 KEEPING GUIDANCE INFORMED**

#### **5.1.1 Internship supervisor**

I have foreseen a Word document in Microsoft OneDrive that has been shared with the supervisor of my Internship. In this document she can 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 is a Excel document which the mentor can open at any time. In this document he can see what I plan on doing or what I have done on a specific day. There is a column where you can see the estimated time and the actual time spent on that topic.

### **5.2 REGULAR / STRUCTURED FOLLOW UP**

Since we are at the same office every day, we don't have much meetings. Sometimes we will discuss something about the application if there needs to be a change or if something is going different than planned.

If we feel like it is needed, there will be a kind of SCRUM-meeting.

If the mentor is not physically available, I can always use teams or email the mentor if I need him.