GNG2101

Design Project User and Product Manual

Excel Injection Tracker

Submitted by:

X-C3LL, Team Z3

Saad Kamal, 300071981
Michael Dolan, 300059454
Janique Hébert, 300165123
Hao Wang, 300143519

July 25th 2021

University of Ottawa

Table of Contents

Table of Contents ii

List of Figures iv

List of Tables v

List of Acronyms and Glossary vi

0 Introduction 1

1 Overview 2

1.1 Conventions 3

1.2 Cautions & Warnings 3

2 Getting started 4

2.1 Set-up Considerations 4

2.2 User Access Considerations 4

2.3 Accessing the System 4

2.4 System Organization & Navigation 5

2.5 Exiting the System 6

3 Using the System 7

4 Troubleshooting & Support 8

4.1 Error Messages or Behaviors 8

4.2 Special Considerations 8

4.3 Maintenance 8

4.4 Support 8

5 Conclusions and Recommendations for Future Work 9

6 Bibliography 10

APPENDICES 11

7 APPENDIX I: Design Files 11

List of Figures

Figure 1: Excel Injection Tracker Landing Page.....9

Figure 2: Enabling Developer Mode.....11

Figure 3: Injection Tracker Sheet.....12

Figure 4: Current Injection Log Sheet.....13

Figure 5: Notification Log Sheet.....13

List of Tables

Table 1. Acronyms vi

Table 3. Referenced Documents 11

List of Acronyms and Glossary

Table 1. Acronyms

Acronym	Definition
VBA	Visual Basic for Applications

0 Introduction

This User and Product Manual (UPM) provides the information necessary for people who take injected medication to effectively use the Excel Injection Tracker and for prototype documentation.

Presented first will be the importance of the problem we are solving and an overview of our product, followed by some conventions and some warnings before using our product. The third section will include a general walkthrough of our system from start to finish. This includes set-up and user access considerations, as well as the organization of our product and how to navigate it. Following is the fourth section which will include a detailed explanation of each function and subfunction of the product. The fifth section will include maintenance and support instructions. Users can refer to this section if they are having difficulties with the system and need to contact someone that could assist them. The sixth section will include the documentation of the product such as various subsystems and the software needed to recreate our product. The manual will end with the conclusions made by the team as well as future recommendations for the next team that decides to work on our system. The goal of this manual is to inform our users as much as possible so that they can use our product to its full potential. We want our product to be simple and easy to use, so we hope that the manual will not be necessary in this case, but it is always good to have. Its purpose is mostly to help other teams that might want to recreate what we have done or would like to further improve our product. This manual is meant to be shared with people intending on using the product, re-making it, or improving it.

1 Overview

This problem is more than just a design problem. It affects people who must take multiple medications as well as injections and have a challenging time remembering where those last injections were taken. A need exists for a product that can remind users when to take an injection of their medication and allows them to record where it was taken and general notes about this injection. This need is important to satisfy because taking medical injections is crucial for some people's health but can easily be forgotten. Remembering the location of the last injection is also important to avoid skin indentation. Dealing with a chronic illness can be stressful enough and having to worry about when and where to take your injection should be the least of your worries.

The fundamental needs that the product must have to satisfy the user is the ability to track the location of the injections, send various notification for injection timings and refills and record notes about the injection after it has been taken. The user also needs a product that is accessible and easy to use, scalable for diverse types of injections and medications, and is aesthetically pleasing.

What differentiates our product from other products on the market is its simplicity. Many other tracking applications have low ratings because they are not user friendly or accessible, as they have smaller fonts or colours that do not accommodate all users. Our product also allows for data to be easily exported for a third party, such as a doctor. Our product is modifiable as well, allowing the users to change their content, and make it more personalized. Changing the font, the colour, or even the format is possible. Finally, what really differentiates us from other products is the fact that our product is mostly stored offline, meaning the risk of data breaches are low. Medical information is very confidential and being able to store information locally will make our users more comfortable than using another cloud-based application.

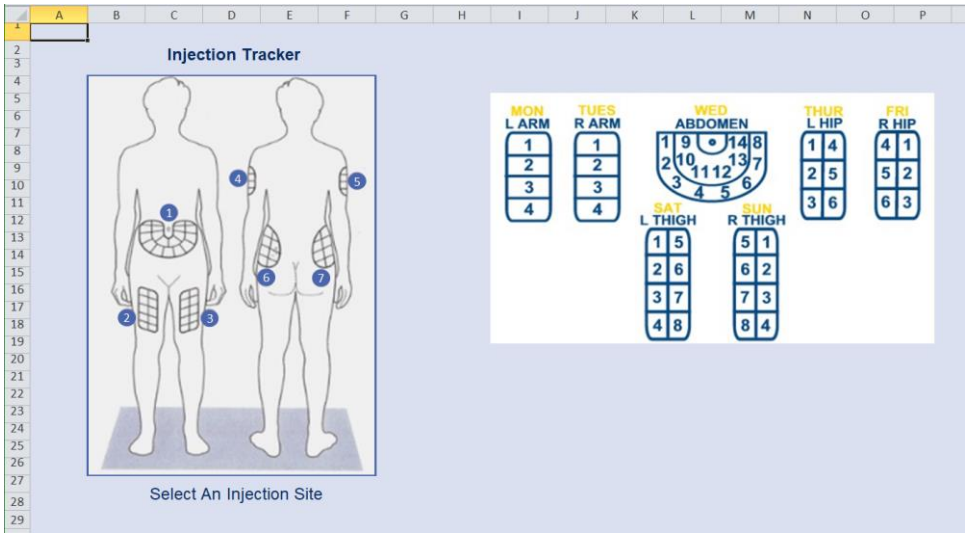

Figure 1: Excel Injection Tracker Landing Page

Our system allows our users to track their injections, in an uncomplicated way, using an injection tracker sheet, an injection log and a notification log. Users can simply choose where they want to inject to do their next injection, select on the tracker, which will bring them to their injection log. This log will help users see where their previous injections were, to help them not repeat these same injections twice in a row. This easy-to-use interface also allows the users to write down comments about their injections, as well as select symptoms they might have experienced. The users simply need a computer, and the rest of the set-up details can be found in the following sections.

1.1 Conventions

Not applicable for this user manual.

1.2 Cautions & Warnings

Not applicable for this user manual.

2 Getting started

2.1 Set-up Considerations

Since this project/prototype is built using Excel and Outlook, all you need is a computer with Excel and Outlook installed on. For push notifications to mobile, the Outlook application is also needed (Note: VBA does not work on mobile, but you should still be able to open the Excel file on mobile to view entered information).

2.2 User Access Considerations

Users must be able to have a basic understanding of injection tracking to begin with. We are assuming that our users know when to take their injections (ex: 3 times a week) and we are simply providing a tool to help them stay organized.

2.3 Accessing the System

To access the project/prototype, you just need to open up the macro-enabled Excel file; everything is included in the file. To see the VBA code, you will need to enable the developer tab in Excel. This is done by going to options, going to "Customize Ribbon", and clicking the checkmark for "Developer" on the right side.

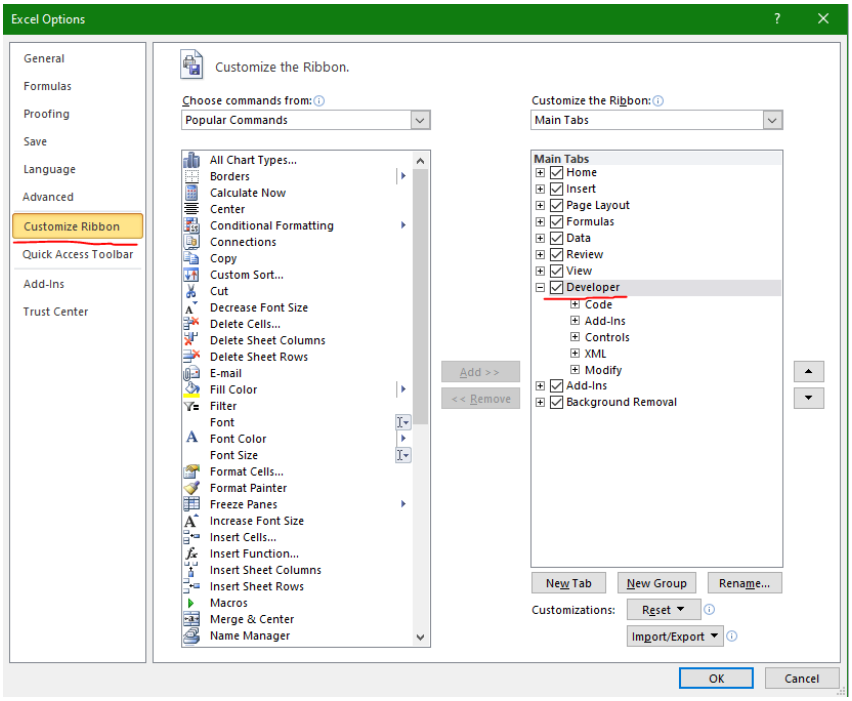

Figure 2: Enabling Developer Mode

2.4 System Organization & Navigation

When opening the project/prototype, you will land on the “Injection Tracker” sheet. The “Injection Tracker” sheet allows the user to click the injection zone and injection site that they would like to log as being injected. Once an injection site is chosen, the sheet is swapped to the “Current Injection Log” sheet.

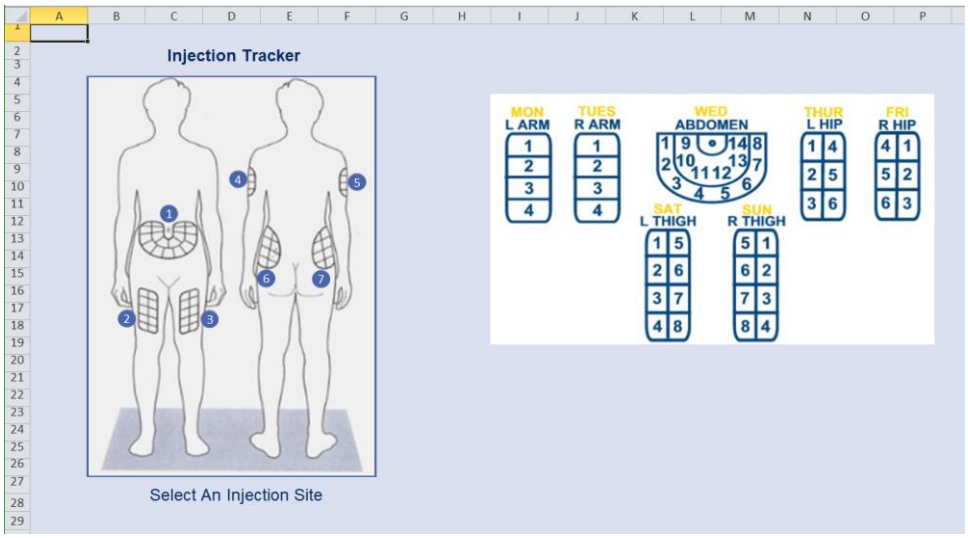

Figure 3: Injection Tracker Sheet

The “Current Injection Log” sheet keeps track of all the injections and related details about the injections, such as date, time, location, symptoms, and comments. There are two buttons on this page being “Update Symptom List” and “Export Data”. The “Update Symptom List” button will update the drop-down list of symptoms to match the table on column G. The “Export Data” button will move every injection log into a new sheet, so that it can be easily exported to PDF.

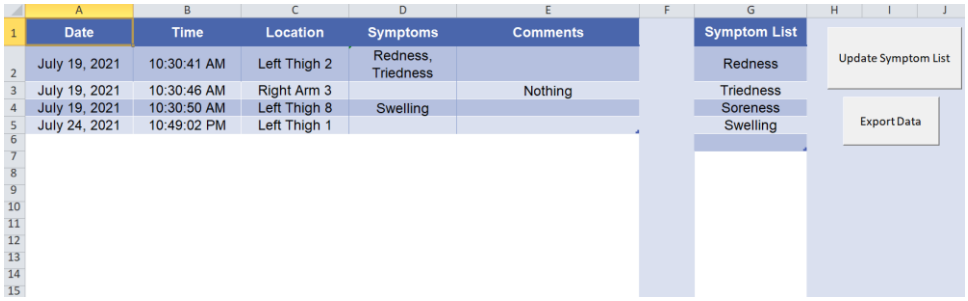

Figure 4: Current Injection Log Sheet

The “Notification Log” is the last sheet, and it creates and logs the notifications to remind one to take their injection. There are two buttons on this page being “Create New Notification” and “Update Still Active”. The “Create New Notification” allows the user to create a new notification by using Outlook’s calendar system. The “Update Still Active” checks the ending date of the notifications (the last date they are set to remind) to see if that day is in the past and updates the still active column as needed.

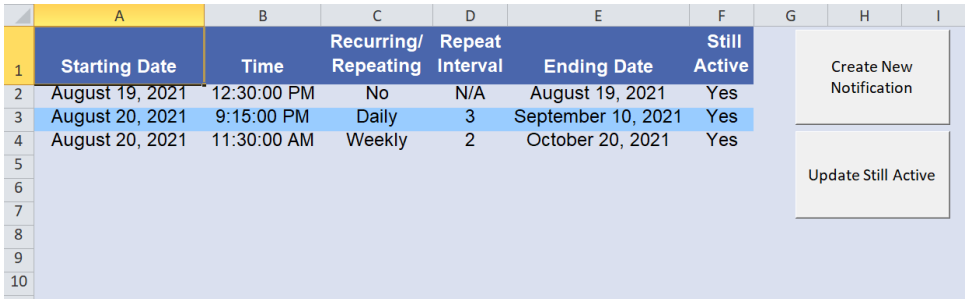

Figure 5: Notification Log Sheet

2.5 Exiting the System

To exit the project/prototype, simply close the Excel file.

3 Using the System

The following section provide detailed, step-by-step instructions on how to use the various functions or features of the Excel injection Tracker.

On the “Injection Tracker” sheet, clicking one of the blue dots on the person will bring up another GUI. Clicking on of the zones on this new GUI will auto fill the log on the “Notification Log”. This is the only function on this sheet.

On the “Notification Log” sheet, clicking the “Create New Notification” button will create a new injection tracker notification with Outlook. Clicking the “Update Still Active” button will check the ending date to ensure notifications are still active.

On the “Current Injection Log” sheet, clicking the “Update Symptom List” button will update the drop-down menu. Clicking the “Export Data” button will move all data inputs to a new page.

4 Troubleshooting & Support

4.1 Error Messages or Behaviors

There should not be any error messages. The functions without user inputs should work without issue, and functions with user inputs have been coded with multiple input checks to ensure valid data is being entered. If an error message does come up, a pop-up will explain the error and highlight the function giving the error.

4.2 Special Considerations

There are no special considerations to note. Everything was made and tested in a way to avoid any issues, so there is nothing to note here.

4.3 Maintenance

Since this is a software project/prototype, nothing should degrade, so there is no special maintenance to note here.

4.4 Support

If there are issues with Excel or Outlook, contacting Microsoft Office support is advised. If there are issues with the VBA code, contacting Michael (mdola059@uottawa.ca) and/or Saad (skama086@uottawa.ca) with an explanation of what has happen is advised.

5 Conclusions and Recommendations for Future Work

To summarize, we learned how to push Excel to its full potential by using VBA macros. We wish we would have made the decision to go with Excel sooner as it would have given us more time to complete our prototype. But we were still able to manage our time well buy using the Wrike platform, which really helped us assign tasks and prepare for the deliverables to come. If there is one thing that we have learned is that it is never too late to change your concept idea, if you do good research. We decided to change our concept almost halfway through the semester, which was a hard decision to make. But because we had a good project plan, and because we informed ourselves, we were able to make the switch to Excel smoothly and still hand out a complete product. Having a diverse team with different skills also really helped to divide tasks and be more productive. We focused on our strengths, and everything was done smoothly.

If we had more time, we would have focused on making the interface as user friendly as possible. The product is still user friendly, but we would have liked to have more information on the main page to help the users navigate through the system smoothly. We also would have liked to finish some of the secondary functions that we did not have time to finish, like an alternate notification input with less buttons to click and can be done in one shot. If another team were to continue to work on this project, they should focus on creating a Google Slides variant of our product. This variant would make our product available on mobile phones, which was our main goal: create an application. This alternative would be more accessible to users and could reach more people, as they would not have to keep going back to their computer every time, they have an injection.

One final recommendation for future teams: invest more time into this user manual. It is a lot more time consuming than one might think, but it is also one of the most helpful tools for the users. Having a complete user manual will engage your users even more, as they will have a better understanding of your product.

6 Bibliography

None were used.

APPENDICES

7 APPENDIX I: Design Files

https://makerepo.com/MDola059/915.gng2101-group-z3-excel-injection-tracker-summer-2021

Table 2. Referenced Documents

Document Name	Document Location and/or URL	Issuance Date
Excel_Main_Final_July23	On the MakerRepo	July 25, 2021
This User Manual	On the MakerRepo	July 25, 2021