LEARN HOW TO BUILD APPS WITHOUT CODE

TIRED OF WAITING FOR YOUR IT TEAM TO BUILD YOUR APP? WHY NOT BUILD IT YOURSELF?

DONAVAN MARAIS

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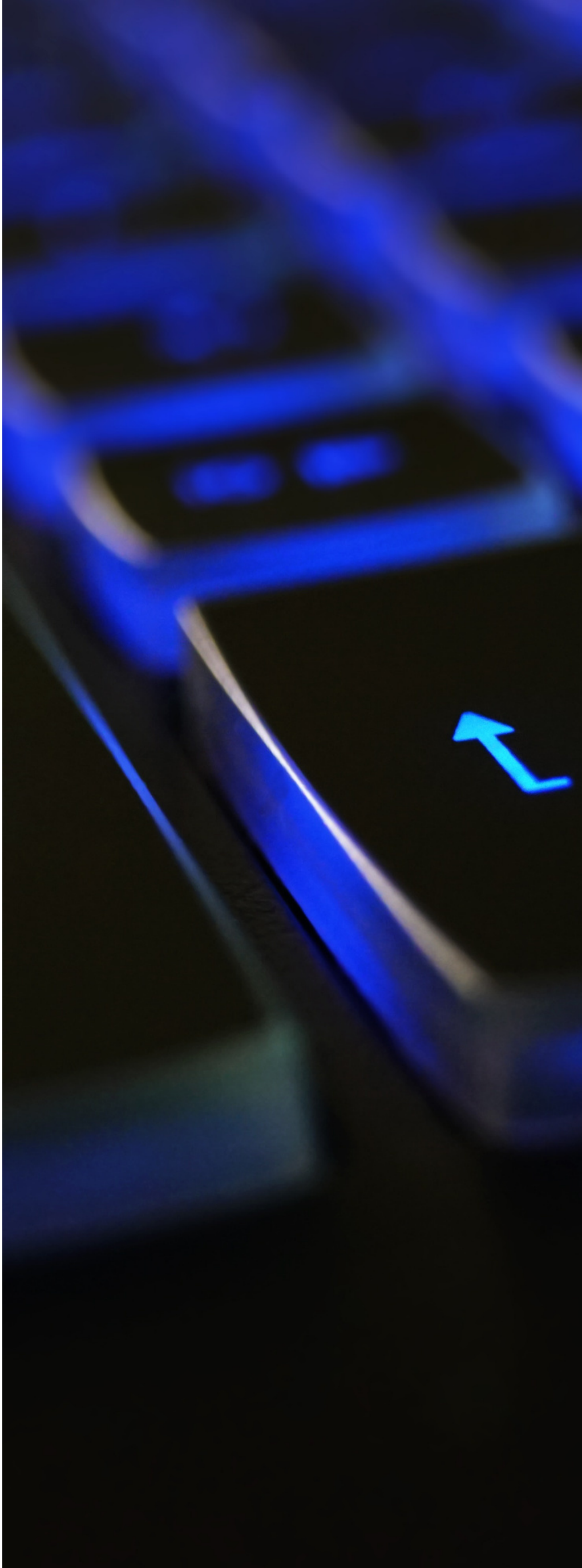


HI THERE, I'M DONAVAN MARAIS

First off, thank you for downloading this book. My goal is to keep this process simple and easy to understand. By the end of this book, you will have a better understanding of what goes into building your first app without writing any code.

I'll walk you through the 7 steps involved; and at the end, you'll be amazed at how simple the process is. You'll be excited and keen to jump right in!

At the end of the book, I have a surprise for you, but let's not get ahead of ourselves. Sit back, relax and enjoy as we build our first app together.

"Innovation distinguishes between a leader and a follower."
- Steve Jobs

Donavan Marais
SOFTWARE ENGINEER

ONE

STEP ONE

THE APP BRIEF:

We'll start by reviewing the details of the application we'll be building.

APPLICATION DETAILS

"Everything should be made as simple as possible, but not simpler."
Albert Einstein

Part of every successful project is careful upfront planning. Make sure you spend enough time working through all the requirements for your application. It can be costly to have to go back and perform big adjustments to your app after the fact.

I am not going to spend much time talking about how to gather requirements, how to track requirements, or even what tools to use when doing so.

To simplify this process, we are going to build a line-of-business application. A line-of-business application is a business critical application, vital in assisting with the management of a process. In this scenario, you are part of a team responsible for managing the incoming change requests from your team. Over the years you have used Excel to keep track of these requests, however, there have been too many issues and your manager is tired of hearing about all the time wasted on keeping the spreadsheet accurate; on top of that, there have been too many instances where somebody copied over the previous version, by accident. What you need is an application!

In our solution, we will need a form for company employees to enter the required information to request a work item. We'll need to store this information somewhere, preferably ensuring that only certain folks have access to it.

THE BIG IDEA

The app will need to provide an ability to view these incoming work requests, assign the requests to a team member, complete work requests, and provide a report on outstanding versus completed work requests..

Depending on how formalized your team is and how you typically manage projects, it makes sense to accumulate all your requirements into a single source, vet it with your manager, then share with the team for acceptance.

Summarizing the requirements document, we have the following requirements to focus on:

- Ability to enter information into a form to submit a work request
- Ability to notify an approver when a new work request is received
- Ability for an approver to view all incoming work requests
- Ability for an approver to assign a work request
- Ability for a team member to complete the work request
- Ability to notify the requester once the work request has been completed
- Ability to email team manager with a monthly activity report

"It's OK to figure out murder mysteries, but you shouldn't need to figure out code. You should be able to read it."
- Steve McConnell.

TWO

STEP TWO

LOOK AND FEEL:

Determine what the app will look like and how it will function.

NAILING DOWN THE APP DESIGN

You may need to work with your marketing department to ensure that you are following your company's branding guidelines. They may have a style guide or perhaps a pattern library that you can follow. A simple and intuitive interface is always the best approach. Either way, let's assume that you received a design brief from your marketing department.

Once completed, the app will be used by the department managers in your company to submit new work requests. The application will consist of the following screens:

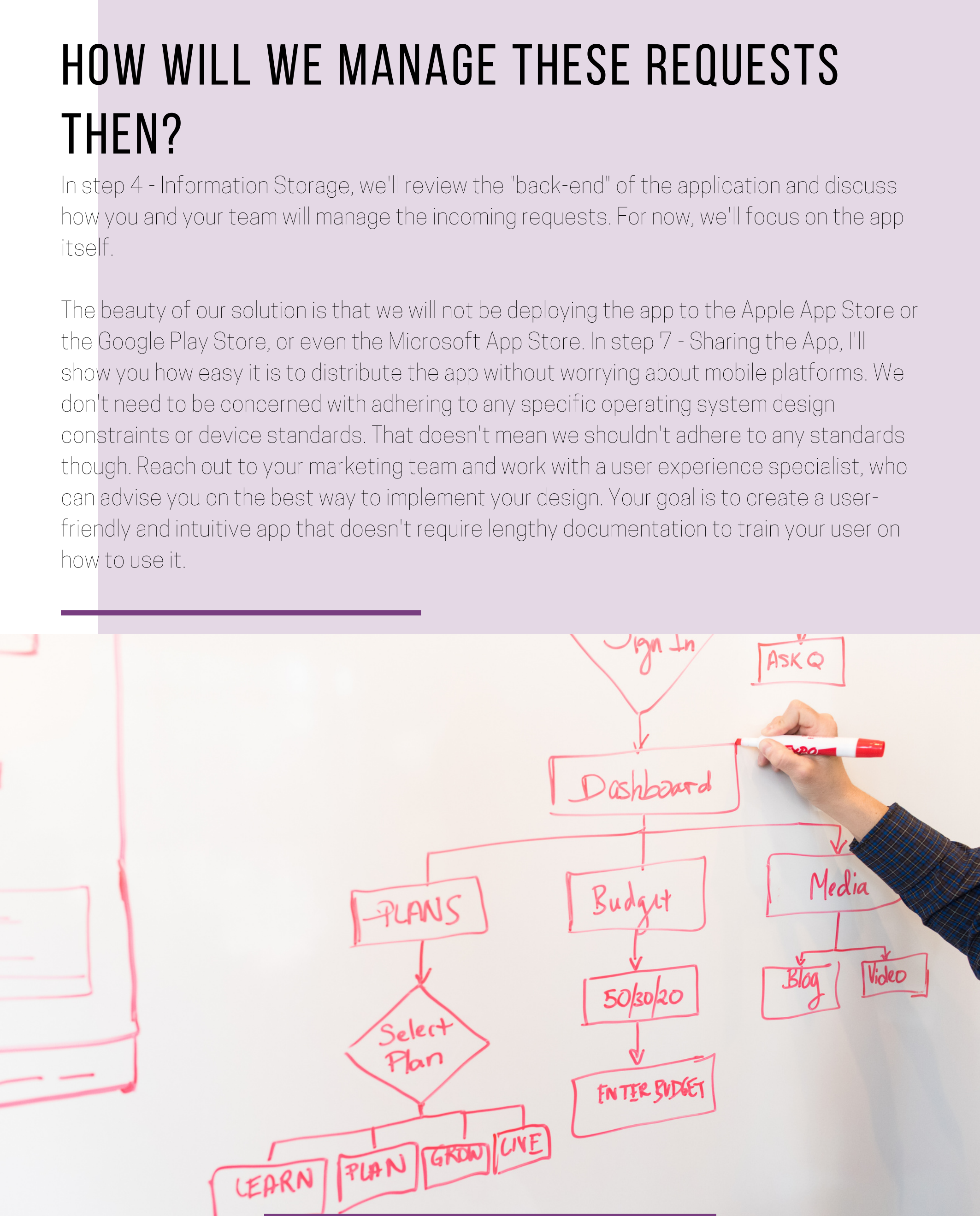
- Submit New Change Request
- View My Change Requests

For this initial version, we shall not add screens to the app for your team to manage these requests. The purpose of the app is to provide a way for these requests to be submitted.

HOW WILL WE MANAGE THESE REQUESTS THEN?

In step 4 - Information Storage, we'll review the "back-end" of the application and discuss how you and your team will manage the incoming requests. For now, we'll focus on the app itself.

The beauty of our solution is that we will not be deploying the app to the Apple App Store or the Google Play Store, or even the Microsoft App Store. In step 7 - Sharing the App, I'll show you how easy it is to distribute the app without worrying about mobile platforms. We don't need to be concerned with adhering to any specific operating system design constraints or device standards. That doesn't mean we shouldn't adhere to any standards though. Reach out to your marketing team and work with a user experience specialist, who can advise you on the best way to implement your design. Your goal is to create a user-friendly and intuitive app that doesn't require lengthy documentation to train your user on how to use it.



THREE

CHAPTER THREE

USER INTERFACE:

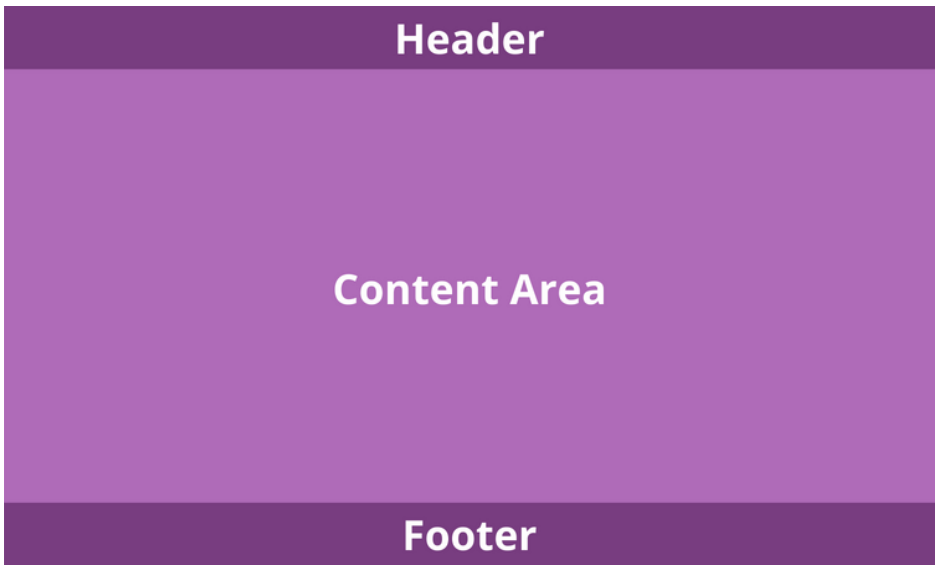
Determining what the app will look like and how it will function.

PLANNING THE USER INTERFACES

"Rule of thumb for UX: More options, more problems."
- Scott Belsky, Chief Product Officer

From the design, we have 3 consistent areas on each screen in the app, that being the:

- Header
- Content Area
- Footer



We'll discuss each area and how we will use this templated approach.

Within the header, we will place the navigation, department icon, and the name of the active screen. The content area will contain the incoming change request form or the list of submitted change requests. Finally, the footer will contain any buttons and information to be shared with the user.

The user will navigate back and forth between the two screens using the navigation in the header. By default, the "New Change Request" screen will open first and once users submit a new request, they will be taken to the "View My Change Requests" screen to view any status updates.

IT'S ALL ABOUT THE USER EXPERIENCE

The "New Change Request" screen's content area will consist of the following form elements:

- Calendar selector for "*Date Required*"
- Text input for "*Work Item Title*"
- Text input for "*Description*"
- Text area input for "*Details of Request*"
- Dropdown input for "*Department*"
- Dropdown input for "*Urgency*"
- Dropdown input for "*Request Type*"

The "View My Change Requests" screen's content area will consist of a list of all submitted work requests that the user has submitted. Department managers will not be able to see work requests for other managers.

This list will contain all the elements from the form, laid out in a simple format, allowing managers to return to the app to view updates on the status of their change requests.

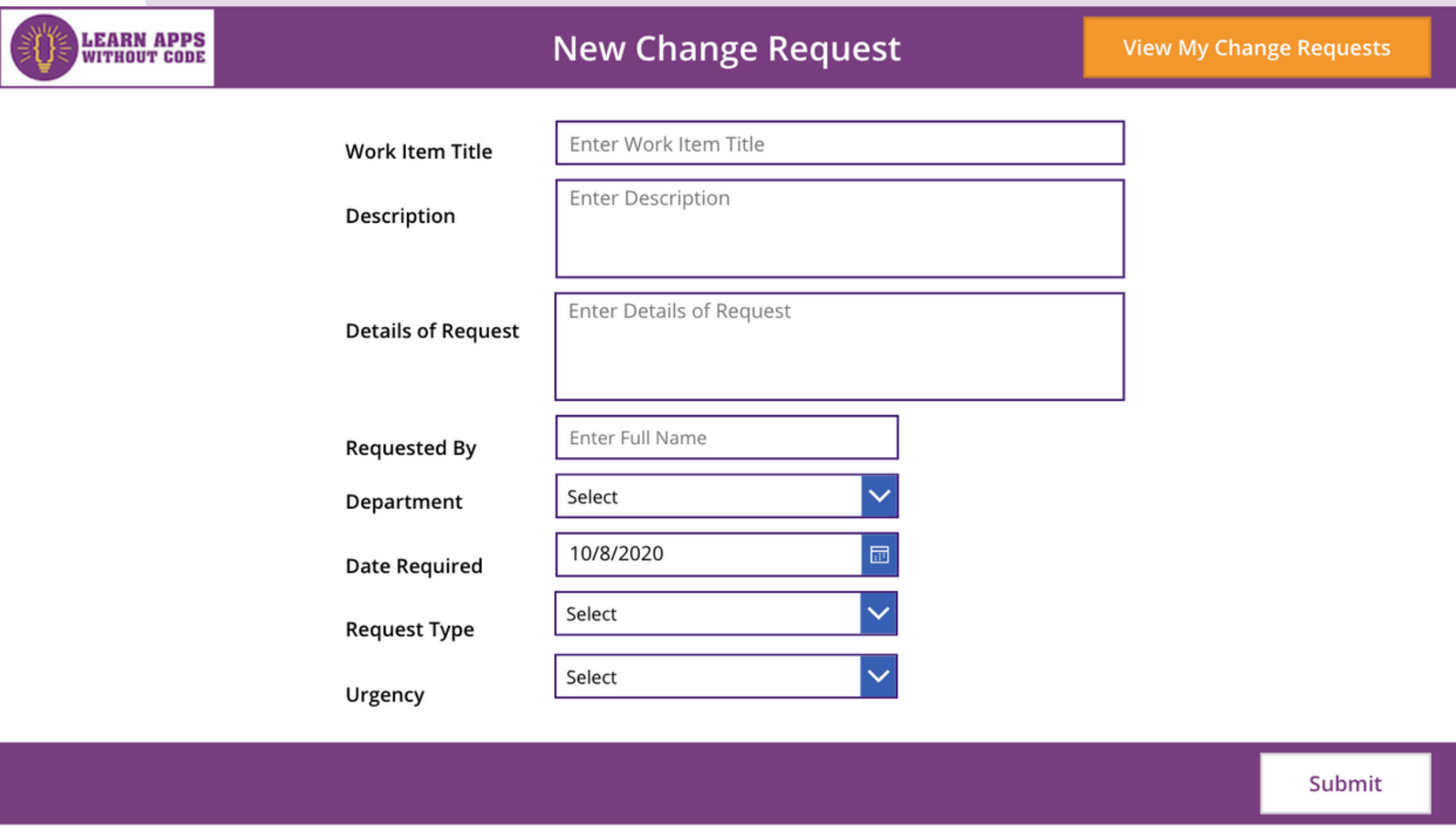
Side note:
If you are interested in participating in my bootcamp on building an app without code in 7 Steps, I go into more detail with simple-to-understand modules, with less of the techy-talk and more of the simplicity.

"Like all forms of design, visual design is about problem-solving, not about personal preference or unsupported opinion."
— Bob Baxley

To build the app screens, we'll be using a "no-code/low-code builder", called Power Apps. If your company is using Office 365 products, you may already have access to the tool. If not, simply contact your IT team and request access. Else you can get access to a trial at https://powerapps.microsoft.com/. If you are comfortable using Microsoft Excel, have experience creating formulas, can drag and drop items, and clicks buttons, then you have what it takes to be successful.

For simplicity sake, this book will not go into detail on how to use the tool. However, I offer a 7-part bootcamp on building apps without code, where I will expand on all the details of Power Apps.

Below is a screenshot of the completed form:



FOUR

STEP FOUR

INFORMATION STORAGE:

Deciding where to store the information.

WHERE TO STORE OUR DATA

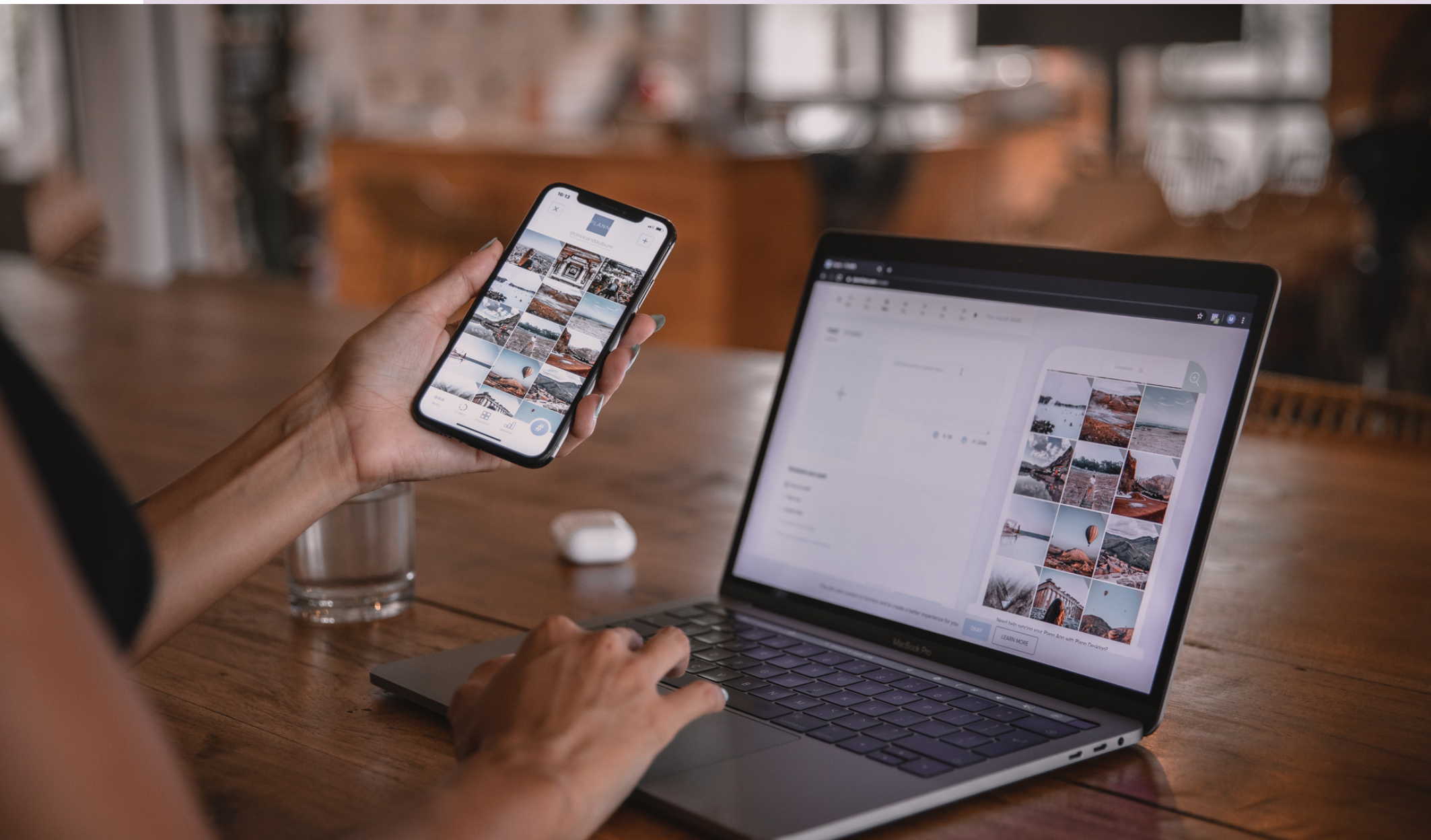
We'd like to avoid using a spreadsheet to store our data, since we're aware of the prior issues. Remember that time when your colleague accidentally deleted the file? Yikes, we don't want that to happen again. This time we'll secure our data by storing it in a SharePoint Online list. This book assumes that your company is using SharePoint online.

We won't have time now to go over the steps on how to create a new list, add columns, set up views, etc. For a refresher, feel free to read the documentation: https://tinyurl.com/y4pty8zj

SETTING UP OUR LISTS

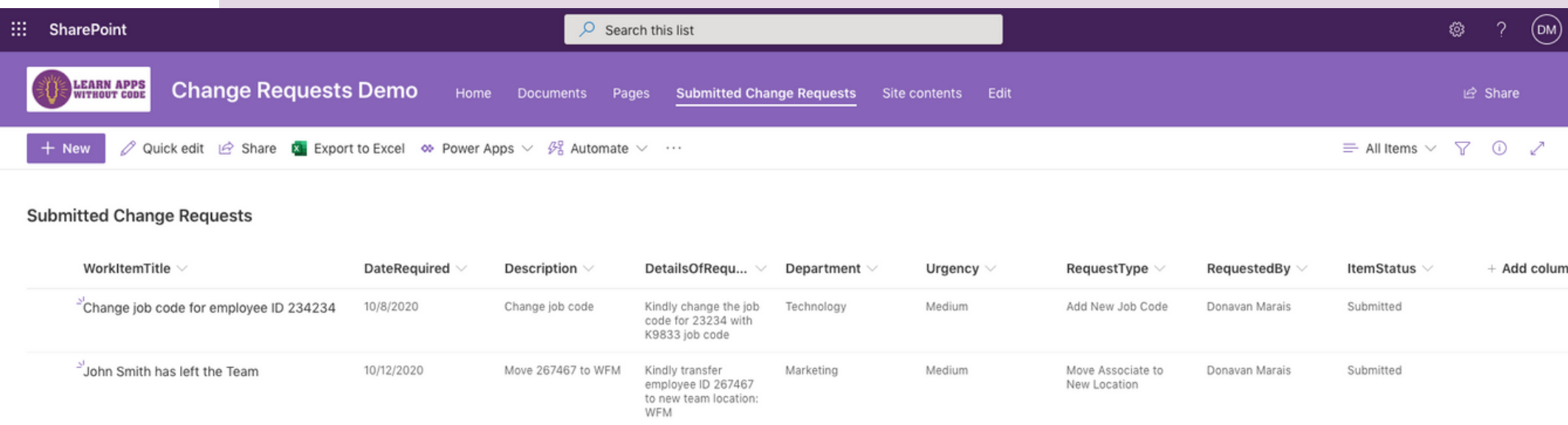
To support our app, we'll need just one list, which we'll call "Submitted Change Requests". Our list is to contain the following fields:

- Date of Request
- Date Required
- Name of Requester
- Department
- Work Item Title
- Description
- Request Type
- Details of Request
- Urgency



CONNECTING THE LIST TO THE APP

With the list in place and our screens created in our app, we ready to start wiring things up; that is to say, connecting the app to the list to ensure that when a manager submits the form, that the information is then saved to the list. In addition, we need to add a number of notifications when certain actions occur in the app. We'll discuss that next.



Thankfully, Microsoft has created a tool, called Power Automate, that can be used to set up the various notifications we need. I won't go into detail here, but if you are interested in 7-part bootcamp on building apps without code, this is where I will go into more detail. For a refresher on Power Automate, feel free to view documentation here: https://tinyurl.com/y3fvwgkj

We will need the following notifications:

- Email you when a manager submits a new request
- Email your team members when you assign a new request to them to complete
- Email the manager when their request has been completed

To set up these notifications, we need to create a new flow for each notification in Power Automate. Power Automate is simple to use and requires no specialized skills. If you can drag and drop and click buttons, you are good to go!

WIRING IT TOGETHER

With our Power Automate flows in place, our SharePoint list ready to store data in, and our Power Apps screens created, we are ready to wire it all up.

To send the information for each new request to our SharePoint list, we simply add a command to the submit button, which will package up the values entered/selected by the manager in the form, and send it to the list. It's a simple case of matching the value to the applicable list field, e.g. Request Type. We copy over each value as we go through all the required fields from the list. We will inform the manager that our app was able to save their information, navigate them to the second screen, that being "View My Change Requests". In addition, we will call our flow, which will handle emailing you to inform you that a new request was received.

We have customized the email such that you will receive all the values for the required fields, including a link to the list, where you can review in more detail.

Once in the list, you can assign the request to a team member. Our flow, that notified our team member of their new assignment, will automatically send out the email as soon as you complete the assignment. When the team member edits the request as completed, our flow then notifies the requestor with an email letting them know that the task is complete.

Side note:
If you are interested in participating in my bootcamp on building an app without code in 7 Steps, I expand on how to set up lists, create the apps screens, set up the flows, and wire up the app in a simple process that is easy to understand.

FIVE

STEP FIVE

REPORTING:

Setting up reporting to keep folks in the know.

REPORTING ON ACTIVITIES

"The goal is to turn data into information and information into insight."
- Carly Fiorina, former chief executive officer, Hewlett Packard.

The app is working and you are in the final stages of completing it. It is simple and intuitive and you have the confidence that your data is accurate and you've ensured that your team members will not be able to delete the list.

You have another puzzle piece to add though. Your manager needs information.

Here's where you can build on your success by winning brownie points with your manager. In this scenario, your manager wishes to get a weekly report on activities around all incoming change requests. Power Automate to the rescue again. We can simply create a flow that will automatically create an Excel file with the necessary columns and values, and email the file to your manager each Monday morning at 8am.

Your manager is welcome to visit the list as well, where columns can be filtered and sorted and exported to Excel. The point is that out of the box, SharePoint can provide you with many ways to slice and dice the information.

SIX

STEP SIX

TESTING THE APP:

Testing ensures that the app will work as intended.

TEST OFTEN, TEST EARLY

“Everything should be made as simple as possible, but not simpler.”
Albert Einstein

Now that we have everything wired up, our flows working, we're getting the emails, and activities are getting recorded, we are ready to test our app before going live.

Take your time with this process. It is important to test all scenarios to catch any issues before your user does.

If this isn't your speciality, reach out to your IT team who may be able to hook you up with a testing team, or perhaps if you have a UX person at your company, you'd be able to delegate the task. Either way, test early and test often, as you go. Check the emails for accuracy, make sure the list data is accurate, and test the app in different browsers, and on different mobile devices.

One of the benefits of using Power Apps to create your app is that you can distribute your app on various devices, whether it be a desktop computer, a laptop, a tablet, or a smartphone.

SEVEN

STEP SEVEN

SHARING THE APP:

Going about sharing the app with others on your team.

SHARING IS CARING

Now that the app is complete, it is time to share the app with your users.

Some important questions to ask as you go through this process:

- Have you shared the SharePoint list with your intended audience?
- Have you shared the Power App with your intended audience?
- Have you made sure your flows in Power Automate are turned on?

If you've correctly done that then your app is officially live! Well done!

The beauty of this entire process is that you didn't need to write any complicated logic in some confusing programming language, or deal with the complicated process of deploying your application to different environments. To publish, all you had to do is save your changes and click the publish button. Once you share the address for your app, your users can open it in the browser of their choice or from the PowerApps app on their mobile device.

SUMMARY OF THE PROCESS

You made it! Not only do you have a better understanding of how to build your own app without any code, you have learnt about the tools needed to do so. Let's summarize what you learnt:

- How to use Power Apps to create the screens for your app
- How to create flows in Power Automate to manage notifications and reporting
- How to set up a SharePoint list to store your data
- How to test your app
- How to share your app

I'll admit that we went through many of the concepts at a high level. I would really like the opportunity to take you through my **7-part bootcamp on building an app without code**.

If you have more questions about my bootcamp, please do reach out to me at info@learnappswithoutcode.com

In my bootcamp, not only will I go through each step in more detail. I promise that not only will you get a lot out of the workshop, you will feel confident and empowered to repeat the process each time to solve many of the typical business challenges you or your team may face. The power is in your hands. Why wait for your IT team to build your app? Why not build IT yourself?

CONCLUSION

FREE WEBINAR:

I WOULD LIKE TO INVITE YOU TO WATCH A FREE WEBINAR ON THE 7-STEPS TO BUILD AN APP WITHOUT CODE.

YOU CAN FIND THE RECORDING AT:

COURSES.LEARNAPPSWITHOUTCODE.COM