Software Development Document

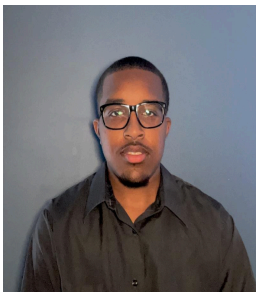
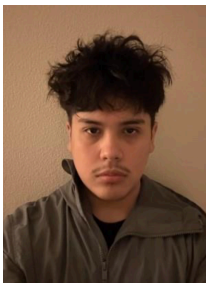
Course: CS 4850 – Section 04

Semester: Fall 2025

Professor: Sharon Perry

Date: October 10, 2025

P26-T1-Automation of Digital Intake with MS 365-Carelink of Georgia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1.0 Development Summary

Overview

This project is about replacing CareLink's old paper intake process with a digital system that saves staff time and keeps everything organized. Right now, CareLink staff spends too much energy printing, scanning, and filing forms. With our setup, the process is much faster, more secure, and easier for both the patients and the staff.

The development work has mainly focused on setting up the automation flow with Microsoft 365 tools (SharePoint, Power Automate, Outlook) and Adobe Sign for digital signatures. We also looked at how to bring old paper forms into the same system, so CareLink has one central place for everything.

So far, the technical pieces are in place:

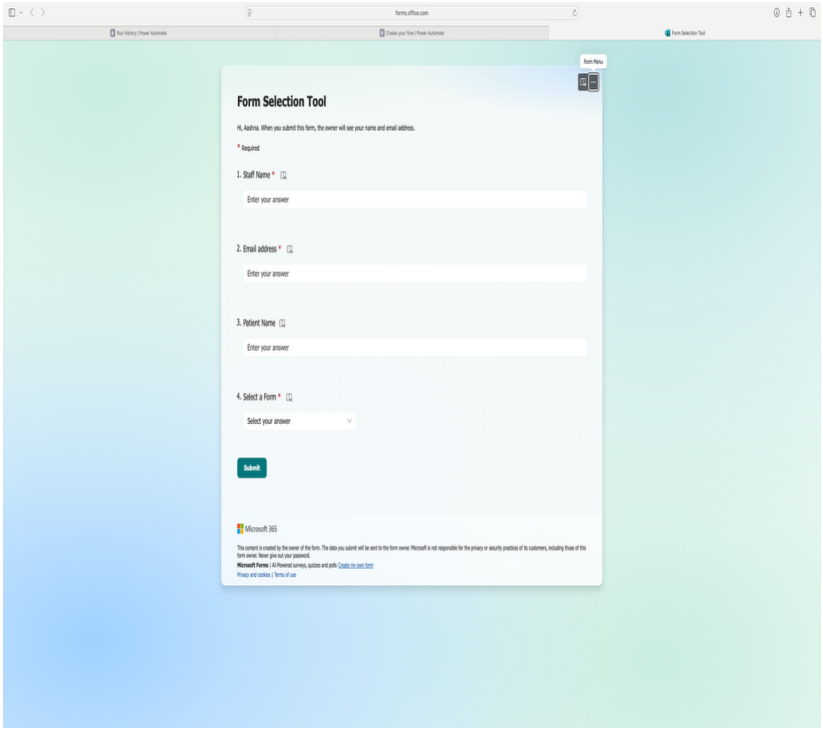
- SharePoint libraries are ready
- Power Automate flow is running
- Adobe is connected for signatures
- Tested how patients and staff will use the system.

1.1 Workflow Automation Setup

The automation setup starts when a patient fills out a digital form. This begins with the Form Selection Tool, which we built using Microsoft Forms. Staff fill in:

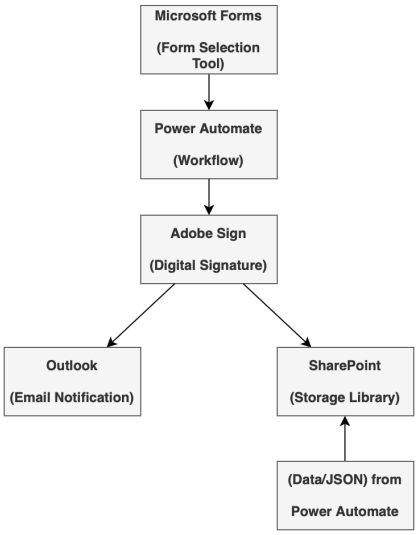
- Staff Name
- Staff Email
- Patient Name
- Form they want to send

Below is a screenshot image of the Form Selection Tool, built using Microsoft Forms that displays the above information.



Once they hit submit, the workflow kicks off automatically. SharePoint pulls the selected blank form, Power Automate connects it with Adobe Sign, and an agreement is created and sent out for signature. After the patient signs, the file gets pushed back into SharePoint under the Form Submissions Library.

This setup removes the old back-and-forth that staff had to do with paper. It’s all automated and tracked step by step. Below is a diagram representing that flow.

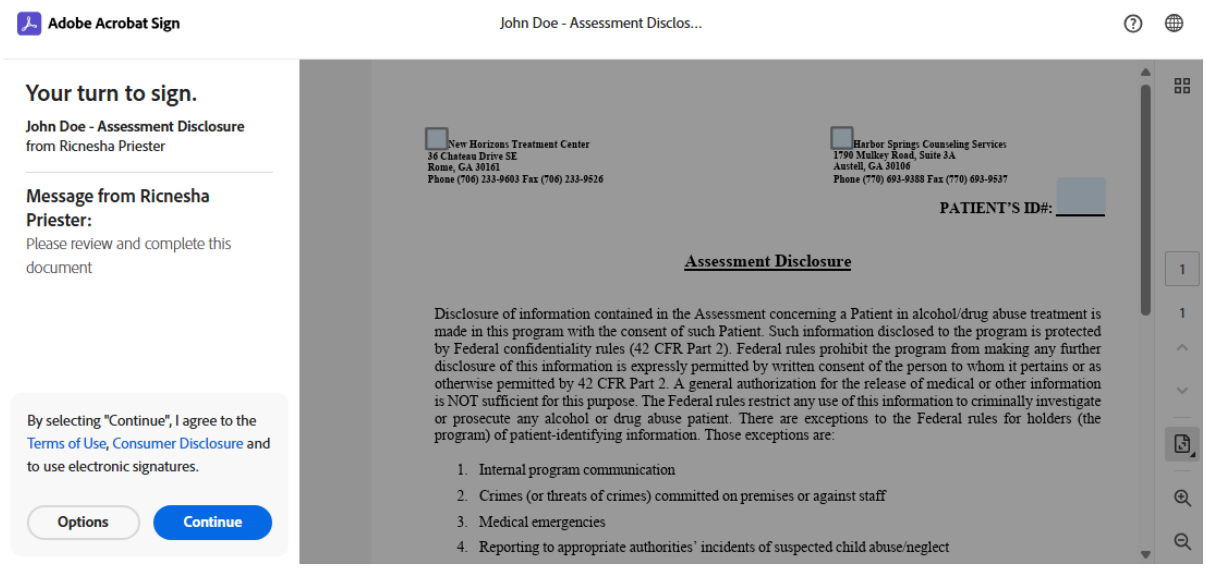


1.2 Digital Signatures & Adobe Integration

Since CareLink wanted patients to sign forms digitally, we integrated Adobe Sign into the workflow. The idea is that patients either sign before they come in (via email) or when they arrive (on a tablet/kiosk).

With the Adobe connector in Power Automate, staff don't need to manually scan signed forms anymore. Instead:

- The blank form is turned into an agreement.
- It’s sent to the patient’s email for signing.
- Patients can type, draw, upload, or use their phone to sign.
- The completed form is saved in Adobe and then sent to SharePoint automatically.

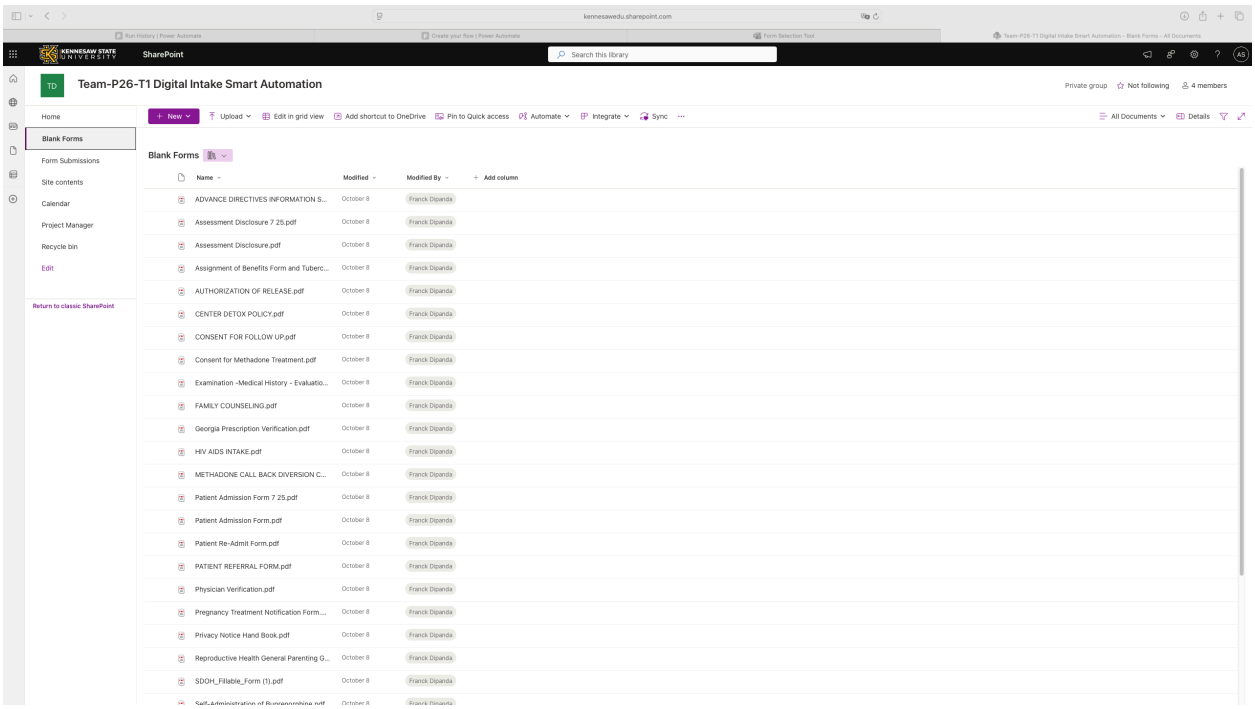


1.3 SharePoint Storage & Permissions

The SharePoint site is where everything is stored. It has:

- Blank Forms Library (first image below - all the forms CareLink gave us, ready to be sent out)
- Form Submissions Library (second image below - signed and completed forms go here with metadata like patient name, staff, and date)
- Project Manager List (third image below - mainly for our team to track workflows, documents, and links, but could be adapted for CareLink if needed)

  Permissions are locked so only staff can access this. That's important since we're in compliance with HIPAA and PHI.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SharePoint
Search this library
Team-P26-T1 Digital Intake Smart Automation
Private group
Not following
4 members
Home
Blank Forms
Form Submissions
Site contents
Calendar
Project Manager
Recycle bin
Edit
Return to classic SharePoint
New
Upload
Edit in grid view
Add shortcut to OneDrive
Pin to Quick access
Automate
Integrate
Sync
All Documents
Details
Blank Forms
Name
Modified
Modified By
Add column
ADVANCE DIRECTIVES INFORMATION S...
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Georgia Prescription Verification.pdf
HIV AIDS INTAKE.pdf
METHADONE CALL BACK DIVERSION C...
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Patient Admission Form.pdf
Patient Re-Admit Form.pdf
PATIENT REFERRAL FORM.pdf
Physician Verification.pdf
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Privacy Notice Hand Book.pdf
Reproductive Health General Parenting G...
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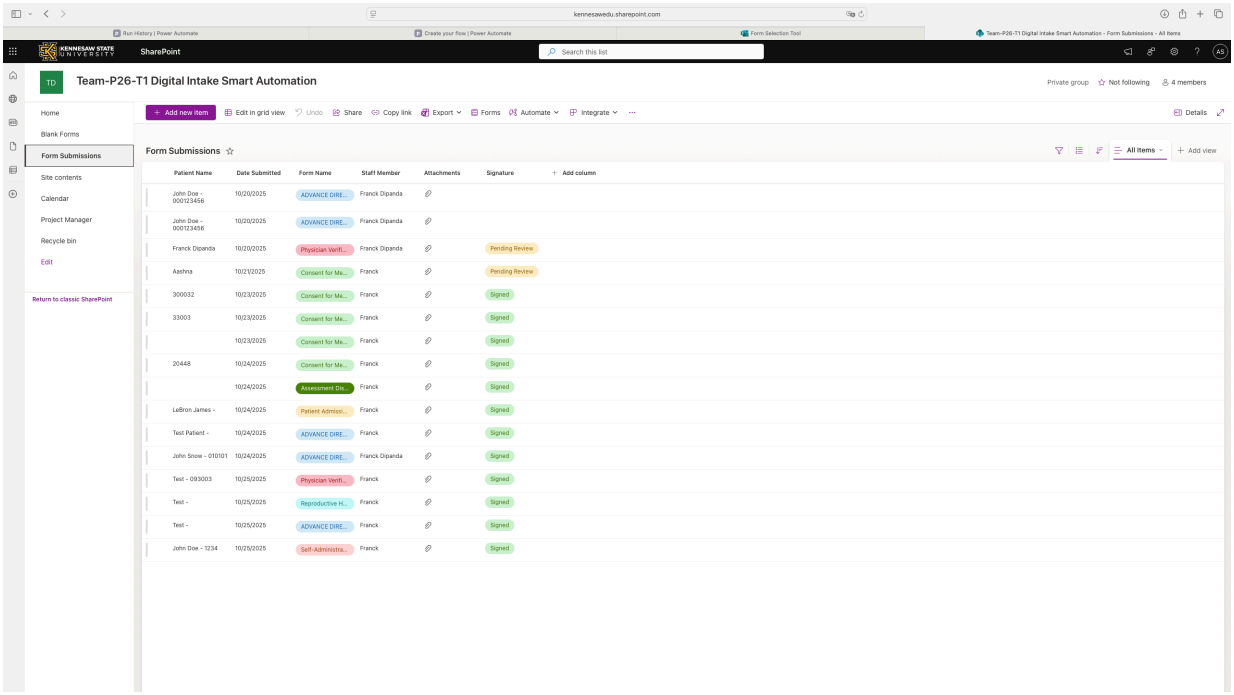
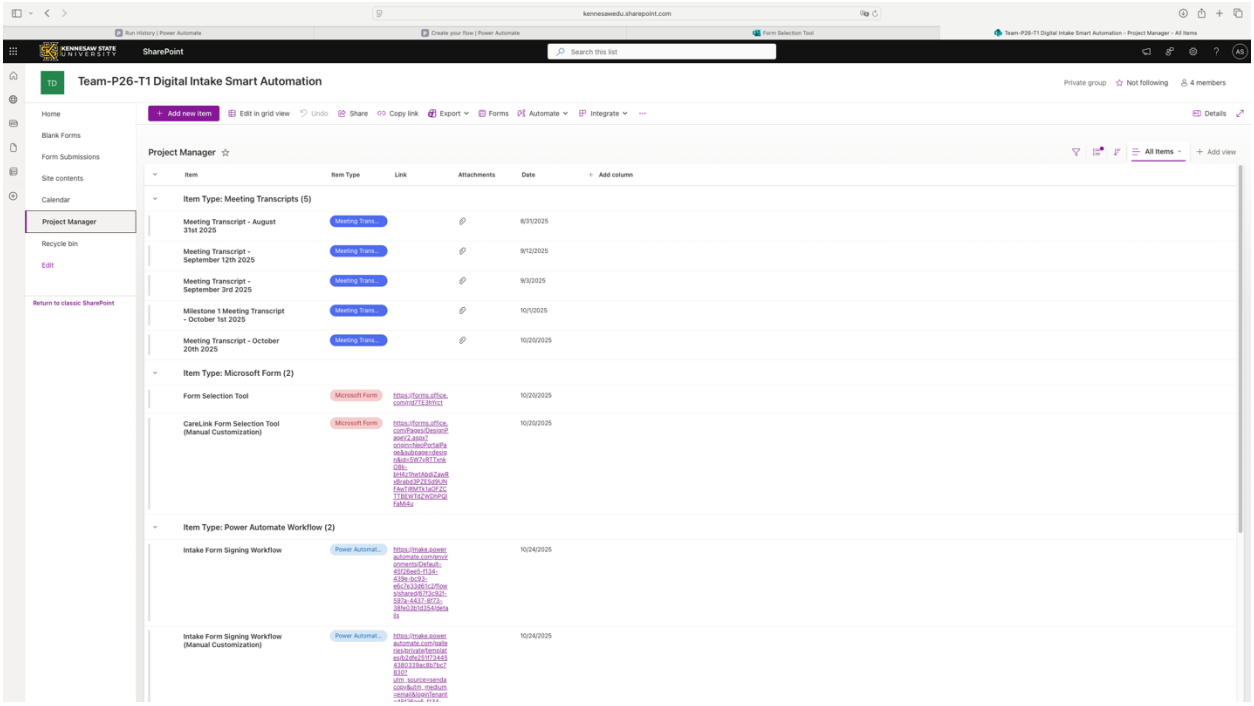
October 8
Franck Dipanda


kennesawedu.sharepoint.com
KENNESAW STATE UNIVERSITY
SharePoint
Search this list
Team-P26-T1 Digital Intake Smart Automation
Private group
Not following
4 members
Home
Blank Forms
Form Submissions
Site contents
Calendar
Project Manager
Recycle bin
Edit
Return to classic SharePoint
Add new item
Edit in grid view
Undo
Share
Copy link
Export
Forms
Automate
Integrate
Details
Form Submissions
All Items
Add view
Patient Name
Date Submitted
Form Name
Staff Member
Attachments
Signature
Add column
John Doe - 000123456
10/20/2025
ADVANCE DIRE...
Franck Dipanda
Franck Dipanda
Physician Verifi...
Pending Review
Aashna
10/21/2025
Consent for Me...
Franck
300032
10/23/2025
Signed
33003
20448
10/24/2025
Assessment Dis...
LeBron James -
Patient Admissi...
Test Patient -
John Snow - 010101
Test - 093003
Test -
Reproductive H...
John Doe - 1234
Self-Administra...



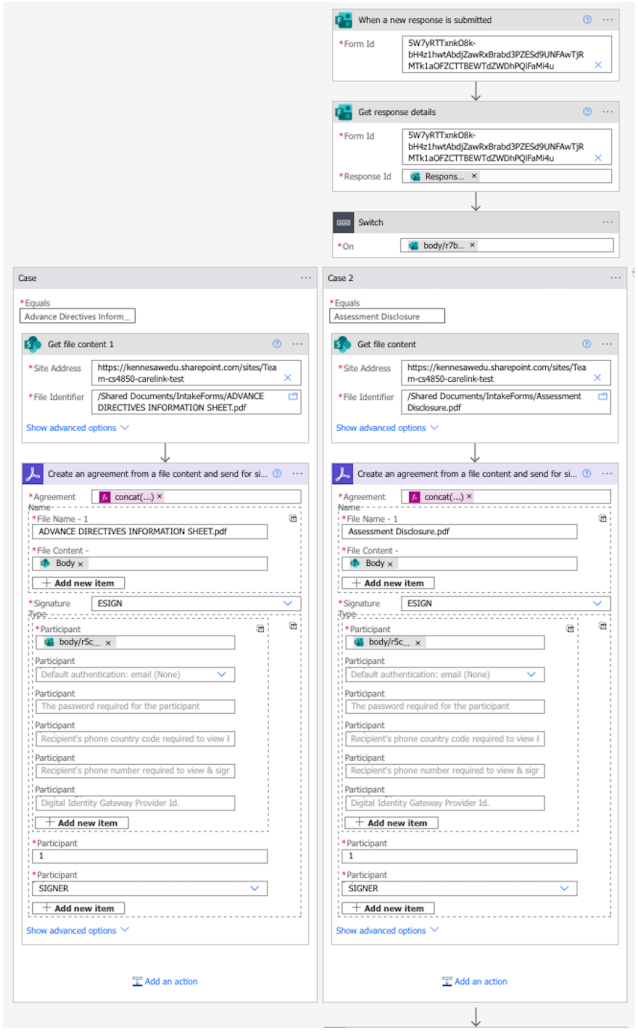
1.4 Power Automate Flow

The Power Automate flow ties everything together. The steps are as follows:

1. Trigger: new response is submitted in the Form Selection Tool.
2. Get response details (staff, patient, form).
3. Initialize variables for later use (naming, IDs).
4. Get file content from SharePoint.
5. Send the form to Adobe Sign as an agreement.
6. Delay and “Do Until” loop – keeps checking until the patient signs.
7. Once signed, grab the PDF copy of the signed agreement.
8. Store it in SharePoint.
9. Create a JSON file with form field data.

This makes sure nothing falls through the cracks, even if a patient takes a while to sign. We demoed this in the Pre-Milestone presentation by showing the submission of a form, receiving the email link, signing through Adobe, and then finding the signed form saved back in SharePoint.

Below is the CareLink Intake Flow displayed in Power Automate.


When a new response is submitted
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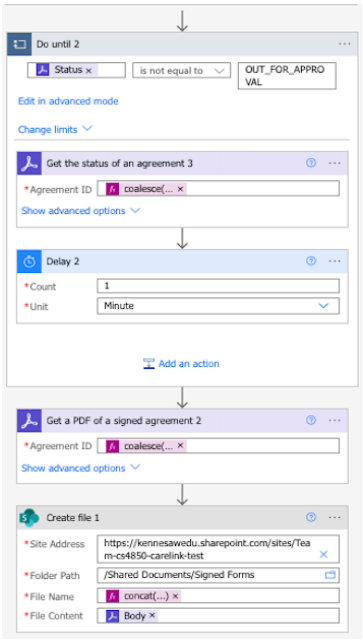
Get response details
*Form Id
5W7yRTTxnkO8k-bH4z1hwtAbdjZawRxBrabd3PZESd9UNFAwTjRMTk1aOFZCTTBEWTdZWDhPQlFaMi4u
*Response Id
Respons...
Switch
*On
body/r7b...
Case
*Equals
Advance Directives Inform...
Get file content 1
*Site Address
https://kennesawedu.sharepoint.com/sites/Team-cs4850-carelink-test
*File Identifier
/Shared Documents/IntakeForms/ADVANCE DIRECTIVES INFORMATION SHEET.pdf
Show advanced options
Create an agreement from a file content and send for si...
*Agreement Name
concat(...)
*File Name - 1
ADVANCE DIRECTIVES INFORMATION SHEET.pdf
*File Content - 1
Body
Add new item
*Signature Type
ESIGN
*Participant
body/r5c...
Participant
Default authentication: email (None)
Participant
The password required for the participant
Participant
Recipient's phone country code required to view t
Participant
Recipient's phone number required to view & sign
Participant
Digital Identity Gateway Provider Id.
Add new item
*Participant
1
*Participant
SIGNER
Add new item
Show advanced options
Add an action
Case 2
*Equals
Assessment Disclosure
Get file content
*Site Address
https://kennesawedu.sharepoint.com/sites/Team-cs4850-carelink-test
*File Identifier
/Shared Documents/IntakeForms/Assessment Disclosure.pdf
Show advanced options
Create an agreement from a file content and send for si...
*Agreement Name
concat(...)
*File Name - 1
Assessment Disclosure.pdf
*File Content - 1
Body
Add new item
*Signature Type
ESIGN
*Participant
body/r5c...
Participant
Default authentication: email (None)
Participant
The password required for the participant
Participant
Recipient's phone country code required to view t
Participant
Recipient's phone number required to view & sign
Participant
Digital Identity Gateway Provider Id.
Add new item
*Participant
1
*Participant
SIGNER
Add new item
Show advanced options
Add an action


Do until 2
Status
is not equal to
OUT_FOR_APPROVAL
Edit in advanced mode
Change limits
Get the status of an agreement 3
*Agreement ID
coalesce(...
Show advanced options
Delay 2
*Count
1
*Unit
Minute
Add an action
Get a PDF of a signed agreement 2
*Agreement ID
coalesce(...
Show advanced options
Create file 1
*Site Address
https://kennesawedu.sharepoint.com/sites/Team-cs4850-carelink-test
*Folder Path
/Shared Documents/Signed Forms
*File Name
concat(...)
*File Content
Body

1.5 Legacy Form Digitization

Besides new intake, CareLink also has a ton of old paper forms. We laid out a plan for Legacy Form Digitization:

1. Staff scan the paper form.
2. OCR or ChatGPT extracts the data into a structured JSON file.
3. A Python script maps that data back into the blank digital form.
4. Both the filled PDF and the original scan are stored in SharePoint.

With this, CareLink can keep original signatures but also build a searchable, consistent archive of patient records.

1.6 Training, Error Handling, & User Experience

We've also talked about what staff training and support would look like. They'll need a training manual with step-by-step screenshots showing:

- How to use the Form Selection Tool.
- How to track and sign forms in Adobe.
- How to find completed forms in SharePoint.

We also thought ahead about common issues:

- If patients don't sign right away, the workflow waits and checks until they do.
- If Adobe doesn't send the form back, staff can retrieve it manually.

The goal is to make the whole thing simple enough so that staff don't feel like they're learning a brand-new system. They just put in names, select a form, and the rest happens behind the scenes.

1.7 Example Use Cases

Writing out the use cases helped us in double-checking the process from both perspectives.

- As a new patient, I want to fill out my forms online or at a tablet in the clinic, so I don't have to deal with paper.
- As a patient, I want to sign forms electronically, so my paperwork is valid without printing anything.
- As a staff member, I want to get notified when a form is completed so I don't miss new intakes.
- As a staff member, I want completed forms stored securely in one place so I can find them later if needed.
- As an administrator, I want a way to digitize old forms, so records are consistent across the organization.

2.0 Database Connection

At the end of the process, every submission creates both a signed PDF and a JSON file in SharePoint. That JSON file is already structured so it could be connected to a database later. That opens the door for things like integration with Methasoft or reporting dashboards.

3.0 Project Setup Steps

To set this project up, these were the main steps we followed:

1. Create the SharePoint site and set up libraries (Blank Forms, Form Submissions, Project Manager).
2. Upload all blank forms provided by CareLink into the library.
3. Build the Form Selection Tool using Microsoft Forms.
4. Connect the form to Power Automate so that each submission kicks off the intake workflow.
5. Integrate Adobe Sign into the workflow to handle digital signatures.
6. Add SharePoint actions in Power Automate to store completed and signed forms in the correct place.
7. Test the entire flow end-to-end with sample forms and test accounts.
8. Begin planning for legacy form digitization with OCR and Python scripts.