Project Background
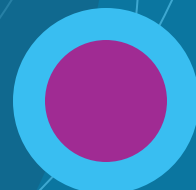
- Egnyte User Management (UM)
- Compound Management System (CMS) Barcodes
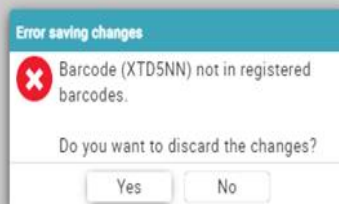- Unit Testing

2

Functional Background

Egnyte UM

- Problem:
  - Inactive users are automatically reloaded into Egnyte Research System

- Task:
  - Offboard inactive users

Current Usage		
Power Users	86 of 160	
Standard Users	152 of 350	
Storage	2576.774 GB of 15 TB	

CMS Barcodes

- Problem:
  - Compound Barcodes could not be moved to new Compound Management System

- Task:
  - Validate and transition on-demand missing barcodes into new CMS

Error saving changes

❌ Barcode (XTD5NN) not in registered barcodes.

Do you want to discard the changes?

[Yes]   [No]

Assign these barcodes to Agios

Peng Liu
To ● Mark Pytlik
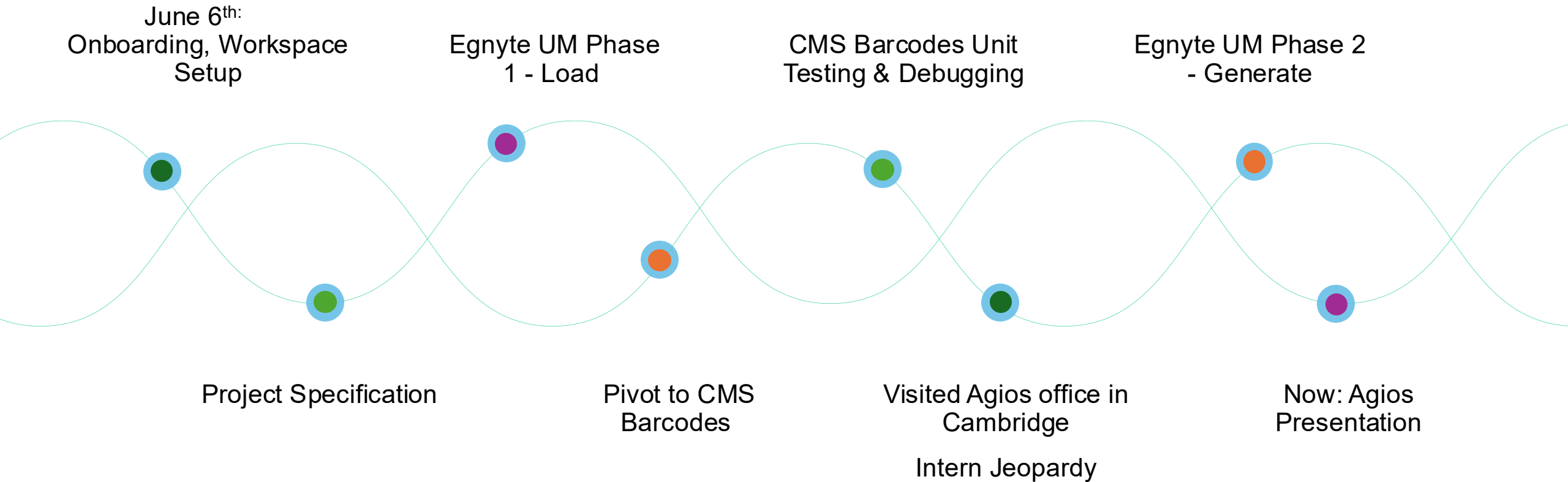ℹ You replied to this message on 5/23/2024 4:40 PM.

Hi Mark,
Please help to assign these barcodes to Agios:
GYZVHC
E2YBB3
MDQHTJ
5MLD5M
3CNRN8
Thanks
-Peng

Unit Testing

- Problem:
  - Each developer had been responsible for individual software testing, not completely reliable, especially if another developer edits the code
  -

- Task:
  - Create automated unit tests to ensure if code is change, still functions as expected,

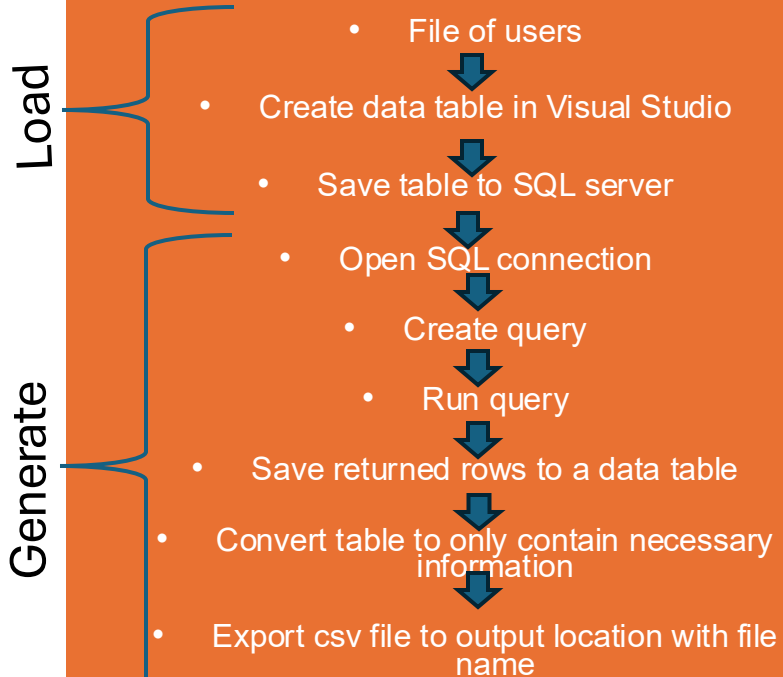I registered a compound last week. I used a barcode from a roll we have in the chemistry lab. Could you please help me register it (XTD5NN)?

TimeLine

June 6th:
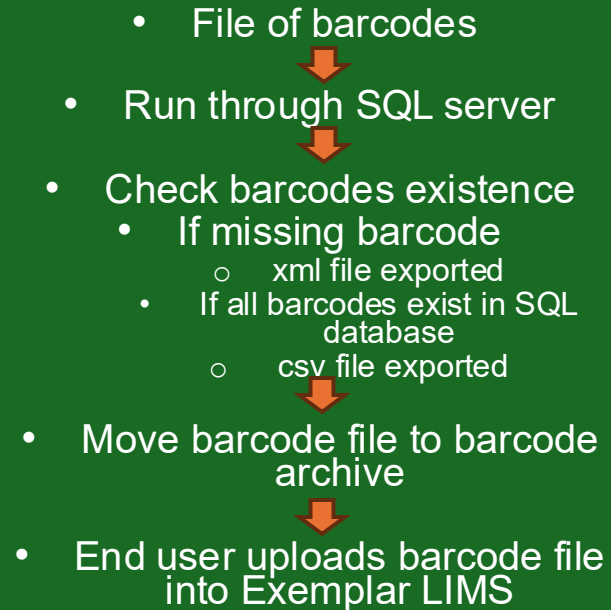Onboarding, Workspace Setup

Egnyte UM Phase 1 - Load

CMS Barcodes Unit Testing & Debugging

Egnyte UM Phase 2 - Generate

Project Specification

Pivot to CMS Barcodes

Visited Agios office in Cambridge

Now: Agios Presentation

Intern Jeopardy

Project Background

Egnyte UM

Load
- File of users
- Create data table in Visual Studio
- Save table to SQL server

Generate
- Open SQL connection
- Create query
- Run query
- Save returned rows to a data table
- Convert table to only contain necessary information
- Export csv file to output location with file name

CMS Barcodes

- File of barcodes
- Run through SQL server
- Check barcodes existence
  - If missing barcode
    - xml file exported
  - If all barcodes exist in SQL database
    - csv file exported
- Move barcode file to barcode archive
- End user uploads barcode file into Exemplar LIMS

Unit Testing

- Write individual test for each function using
  - Arrange
  - Act
  - Assert

- Test and Debug
  - Find and fix problems during

Start options

Command line arguments: -mode=verify -path=c:\temp\barcodes\barcodes0x9.txt -
                          archivefolder=c:\temp\barcodesarchive -ofn=c:\temp
                          \outputlocation\2testbarcodes.csv -cro=Agios

Working directory:

Use remote machine

Missing Barcodes

doverifytest.txt - Notepad

File   Edit   Format   View   Help

QDVS4C
NPN63D
fakebarcode1
fakebarcode2

CMS Barcodes

barcodes0x9.txt - Notepad

File   Edit   Format   View   Help

QDVS4C
NPN631

All Valid Barcodes

	A	B	C	D	E
1	<?xml version="1.0" standalone="yes"?>				
2	<DocumentElement>				
3	<Missing_x0020_Barcodes>				
4	<Barcode>fakebarcode1</Barcode>				
5	</Missing_x0020_Barcodes>				
6	<Missing_x0020_Barcodes>				
7	<Barcode>fakebarcode2</Barcode>				
8	</Missing_x0020_Barcodes>				
9	</DocumentElement>				
10					

	A	B	C
1	BarcodeType	Barcode	OrganizationId
2	Compound Item	QDVS4C	Agios
3	Compound Item	NPN63D	Agios
4			
5			
6			

N22   fx   11/16/2013

Egnyte UM Phase1 - Load

#	A UserName	B LastName	C FirstName	D Email	E Type	F Role	G AuthType	H Active	I IdpUserId	J UserPrinc	K ExpiryDate	L DeleteOnE	M CreatedBy	N CreationD	O LastActive	P ManagedE	Q MostRece	R MostRece	S DaysInactive
2	agiosphar	Pharmace	Agios	agiosphar	admin		egnyte	yes					Mark Pytli	########	6/12/2024	yes	LOGIN_AU	LOGIN	1
3	jeff_saunc	Pytlik	Mark	mark_pytl	admin		egnyte	yes					Mark Pytli	########	2/2/2022	yes	ANY		862
4	frank_sali	NULL	NULL	frank.sali	standard		egnyte	no					Mark Pytli	########	5/3/2010	yes	ANY		5155
5	robert_sut	Suto	Robert	robert.sut	standard		egnyte	no					Mark Pytli	########	7/28/2020	yes	ANY		1415
6	ray_browr	Brown	Ray	ray.brown	standard		egnyte	no					Mark Pytli	########	1/29/2010	yes	ANY		5249
7	gmcgill	McGill	Gael	mcgill@di	standard		egnyte	no					Mark Pytli	########	11/5/2009	yes	ANY		5333
8	rgirards	Girards	Richard	rgirards@	standard		egnyte	no					Mark Pytli	########	2/12/2010	yes	ANY		5234
9	ckuhner	Kuhner	Carla	ckuhner@	standard		egnyte	no					Mark Pytli	########	4/9/2010	yes	ANY		5178
10	kristitr	Travers	Kristi	ktravers@	standard		egnyte	no					Mark Pytli	########	2/22/2010	yes	ANY		5224
11	eprevite	Previte	Edward	eprevite@	standard		egnyte	no					Mark Pytli	########	########	yes	ANY		4593
12	ssinger	Singer	Steve	steven.sin	standard		egnyte	no					Mark Pytli	########	2/19/2010	yes	ANY		5228
13	agiosadm	Admin	Agios	egnyte.adi	admin		egnyte	yes					mark pytli	########	1/19/2024	yes	LOGIN_AU	LOGOUT	145
14	vivaadmir	Admin	Viva	yu.xia@viv	power	Default	egnyte	no					mark pytli	########	########	yes	ANY		932
15	chempart	Yu	Thomas	klyu@chei	standard		egnyte	no					mark pytli	########	5/18/2017	yes	ANY		2583
16	agios_viva	Viva	Agios	agios.viva	standard		egnyte	yes					mark pytli	########	4/9/2010	yes	ANY		5178
17	agios_che	Chempart	Agios	agios.che	standard		egnyte	yes					mark pytli	########	4/9/2010	yes	ANY		5178
18	agios_sai	Sai	Agios	agios.sai(	standard		egnyte	yes					mark pytli	########	4/9/2010	yes	ANY		5178
19	mvervais	Vervais	Michelle	michelle.\	standard		egnyte	no					Mark Pytli	########	4/10/2010	yes	ANY		5177
20	agios.bios	Biosino	Agios	agios.bios	standard		egnyte	yes					mark pytli	########	4/12/2010	yes	ANY		5175
21	manuel_k	Kohler	Manuel	manuel.k(	standard		egnyte	no					mark pytli	########	4/30/2010	yes	ANY		5157
22	eth_admir	Heer	Dominik	heer@ims	standard		egnyte	no					mark pytli	########	5/19/2010	yes	ANY		5139
23	agioscelg	agioscelg	agioscelg	agioscelg	standard		egnyte	yes					mark pytli	########	5/13/2010	yes	ANY		5144
24	scanan_c	Canan	Stacie	scanan@c	standard		egnyte	no					mark pytli	########	9/13/2012	yes	ANY		4290
25	pworland_	Worland	Peter	pworland	standard		egnyte	no					mark pytli	########	10/9/2012	yes	ANY		4265
26	joachim.k	Wegener	Dennis	dennis.we	standard		egnyte	no					mark pytli	########	########	yes	ANY		4921
27	agios.sbc	SBC	Agios	agios.sbc	standard		egnyte	yes					mark pytli	########	6/10/2010	yes	ANY		5117
28	dauld_ma	Auld	Doug	dauld@m	standard		egnyte	no					mark pytli	########	7/9/2010	yes	ANY		5088
29	thornen_n	Thorne	Natasha	thornen@	standard		egnyte	no					mark pytli	########	5/24/2011	yes	ANY		4768
30	sbahman	Bahmanya	Sami	sbahman	standard		egnyte	no					mark pytli	########	########	yes	ANY		3493
31	pchamber	Chamberl	Philip	pchamber	standard		egnyte	no					mark pytli	########	########	yes	ANY		4991
32	bfahr_celc	Fahr	Bruce	bfahr@cel	standard		egnyte	no					mark pytli	########	3/24/2011	yes	ANY		4830
2533	john.lens	Lenss	John	john.lenss	power	Default	sso	yes		john.lenss@agios.com			Egnyte Sto	5/28/2024	5/28/2024	yes	FILE_AUDI	ADD_FOLD	16
2534	morganc	Cope	Morgan	morganc	standard		egnyte	yes					Agios Pha	5/30/2024	6/13/2024	no	FILE_AUDI	PREVIEW	0
2535	victoria.n	North	Victoria	Victoria.N	standard		egnyte	yes					Agios Pha	5/31/2024	6/11/2024	no	LOGIN_AU	LOGIN	2
2536	merrick.sr	Smith	Merrick	Merrick.Sr	standard		egnyte	yes					Agios Pha	5/31/2024	6/12/2024	no	FILE_AUDI	DOWNLOA	1
2537	bryan.wel	Wehrenbe	Bryan	bryan.wel	power	Default	sso	yes		bryan.wehrenberg@agios.com			Egnyte Sto	6/5/2024	6/7/2024	yes	FILE_AUDI	DOWNLOA	6
2538	jlindau_qi	Lindau	Jonah	jlindau@c	standard		egnyte	yes					Agios Pha	6/7/2024	6/13/2024	no	LOGIN_AU	LOGIN	0
2539	rachel.lev	Levy	Rachel	rachel.lev	power	Default	sso	yes		rachel.levy@agios.com			Egnyte Sto	6/7/2024	6/7/2024	yes	FILE_AUDI	ADD_FOLD	6

Egnyte UM Phase2 –Generate

Start options

Command line arguments:
```
-mode=generate -outputloc=c:\temp\outputlocation
\Egnytegenerate.csv -whereclause="where Active='yes' and
authtype='egnyte' and UserPrincipalName is not null"
```

Working directory:

Browse...

☑ Use remote machine

	Username	LastName	FirstName	Email	Type	Role	AuthType	IdPUserID	UserPrinc	Active	SendInvite	ExpiryDate	DeleteOnE	SpecialAction
1	Username	LastName	FirstName	Email	Type	Role	AuthType	IdPUserID	UserPrinc	Active	SendInvite	ExpiryDate	DeleteOnE	SpecialAction
2	jsmith			jsmith@a	admin									
3	amarshall			amarshal	power									
4	mjones			mjones@a	power									
5	bjohnson			bjohnson	standard									
6	hwilliams													
7	rbrown													
8	ebishop			ebishop@	standard									
9	jclark			jclark@ac	power									

	UserName	LastNam	FirstNam	Email	Type	Role	AuthType	IdPUserID	UserPrinc	Active	SendInvite	ExpiryDate	DeleteOnE	SpecialAction
1	UserName	LastNam	FirstNam	Email	Type	Role	AuthType	IdPUserID	UserPrinc	Active	SendInvite	ExpiryDate	DeleteOnE	SpecialAction
2	aaron.hohos_certara.com			aaron.hohos@certara.	standard									
3	abigail.purser_ppd.com			Abigail.Purser@ppd.co	standard									
4	agios.biosino			agios.biosino@agios.	standard									
5	agios.chemdiv_agios.com			agios.chemdiv@agios.	standard									
6	agios.ebiochem_agios.com			agios.ebiochem@agio	standard									
7	agios.hdbio_agios.com			agios.hdbio@agios.co	standard									
8	agios.hovione_agios.com			Agios.Hovione@agios.	standard									
9	agios.kymos_agios.com			Agios.Kymos@agios.c	standard									
10	agios.pharmaresources_agios.com			agios.pharmaresource	standard									
11	agios.ppd_agios.com			Agios.PPD@agios.com	standard									
12	agios.primera_agios.com			Agios.Primera@agios.	standard									
13	agios.qcl_agios.com			agios.qcl@agios.com	standard									
14	agios.rph_agios.com			Agios.RPH@agios.com	standard									
15	agios.sbc_agios.com			agios.sbc@agios.com	standard									
16	agios.wuxi_agios.com			agios.wuxi@agios.con	standard									
17	agios_chempartner			agios.chempartner@a	standard									
18	agios_dmpk			agioscrodmpk@agios.	standard									
19	agios_sai			agios.sai@agios.com	standard									
20	agios_viva			agios.viva@agios.com	standard									
21	agiosadmin			egnyte.admin@agios.c	admin									
22	agioscelgenejrc			agioscelgenejrc@agio	standard									
23	agioscrochemistry_agios.com			agioscrochemistry@ag	standard									
24	agiosegnyte.cmc_agios.com			agiosegnyte.cmc@agic	standard									
25	agiosemerald_agios.com			agios.emerald@agios.	standard									
26	agiospharma			agiospharma.egnyte@	admin									
27	alena.dreiling_rottendorf.com			Alena.Dreiling@rottenc	standard									
28	alena.sergeeva_rottendorf.com			alena.sergeeva@rotter	standard									
29	alexander.schmid_rottendorf.com			alexander.schmid@rol	standard									
30	allyson.bower			Allyson.Jenkins@agios	standard									

EgnyteUMfilename

Ready — Accessibility: Unavailable

```csharp
10          [Fact]
            0 references
11          public void OpenSqlConnection_Eror()
12          {
13              // Arrange
14              DBAL dbal = new DBAL();
15
16              // give an invalid connection string to cause an exception
17              string invalidConnectionString = "Server=invalid_server;Database=invalid_db;User Id=invalid_user;Password=invalid_passw
18              SqlConnection connection = new SqlConnection(invalidConnectionString);
19              dbal.OpenSqlConnection();
20
21              // Act
22              var exception = Record.Exception(() => connection.Open());
23
24              // Assert
25              Assert.NotNull(exception); // check exception was thrown
26          }
27
```

Test	Duration	Traits	Error Mes
Verify_ExportToCSV_True	3 ms		
Verify_DoVerify_Error	1 ms		
Verify_DoVerify	40 ms		
Verify_CreateFiles_True	4 ms		
Verify_CheckPath_True	3 ms		
Verify_CheckPath_Error	2 ms		
Verify_CheckOutputFileName_True	1 ms		
Verify_CheckOutputFileName_Error	1 ms		
Verify_CheckFileLength_True	1 ms		
Verify_CheckArchive_True	1 ms		
Verify_CheckArchive_Error	1 ms		
TruncateStringColumns_True	2 ms		
OpenSqlConnection_Eror	15 sec		
OpenSQLConnection_True	4 ms		
DBAl_FullSave_notequal_True	18 ms		
DBAl_FullSave_True	286 ms		
DBAL_truncatestringcolumns_Error	1 ms		
DBAL_ExecutQuery_singlequote_...	27 ms		
DBAL_ExecutQuery_True	16 ms		
DBAL_CompareTables_MISSING_T...	497 ms		
DBAL_CompareTables_EQUALS_Tr...	1 ms		
DBAL_CompareTables_EMPTY_EQ...	1 ms		
DBAL_CREATEQUERY_EQUALS_true	3 ms		
CloseSqlConnection_Error	12 ms		

```csharp
            [Fact]
            0 references
            public void DBAL_CREATEQUERY_EQUALS_true()
            {
                // Arrange
                DBAL dbal = new DBAL();
                SqlConnection connection = dbal.OpenSqlConnection();

                var table1 = new DataTable();
                table1.Columns.Add("Barcode", typeof(string));

                var row = table1.NewRow();
                row["Barcode"] = "BAR23CODE";
                table1.Rows.Add(row);

                var row1 = table1.NewRow();
                row1["Barcode"] = "BAR45CODE";
                table1.Rows.Add(row1);

                var row1a = table1.NewRow();
                row1a["Barcode"] = "BAR34ACCEPTED";
                table1.Rows.Add(row1a);

                //Act
                string returnedquery = dbal.CreateQuery(table1, connection);

                //Assert
                Assert.Equal("SELECT * FROM barcodes_used WHERE barcode IN ('BAR23CODE', 'BAR45CODE', 'BAR34ACCEPTED');", returnedquery);
            }
```
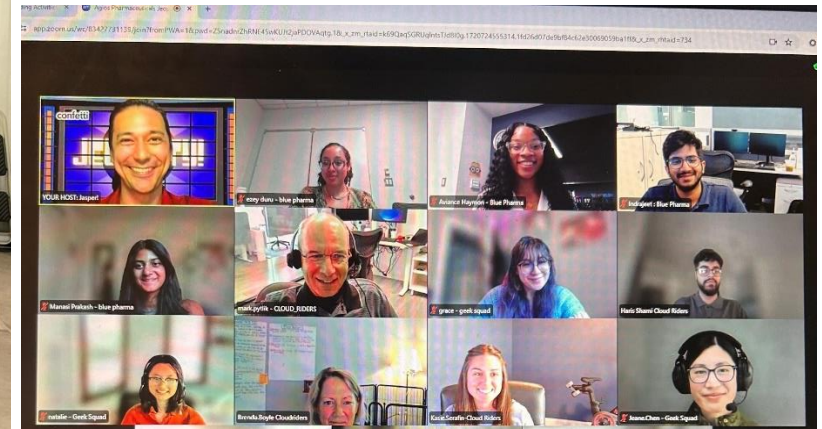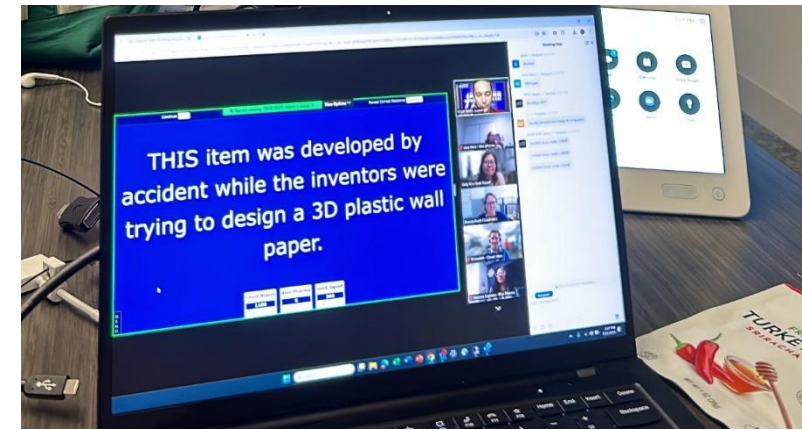
Remote – In Person (July)

Vison 2022-2026

Skills I Have Learned

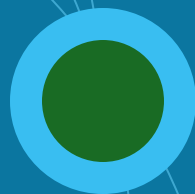C# Programing Language

SQL Server Database

Visual Studio 2019

Microsoft SQL Server Management Studio 2017

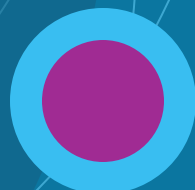Unit Testing with Xunit and breakpoints

Spec and Sprints Write Up

agios

Acknowledgment

Manager
Mark

Points of Contact
Grace, Kasie, Nicole

Intern Team