



MILESTONE 10

SOLUTION SEEKERS



TABLE OF CONTENTS

Team Introduction	<u>3</u>
Client Introduction	<u>5</u>
Milestone 10 Overview	<u>6</u>
Implementation Plan	<u>7</u>
Implementation Paper	<u>9</u>
Training Paper	<u>21</u>
Training Feedback Form	<u>23</u>

TABLE OF CONTENTS

Client Signage 24

Lessons Learned 25

MEET OUR MEMBERS



BRADLEY PIKE

FRONT END DEVELOPER &
CONTACT REPRESENTATIVE

Bradley Pike serves as our main point of contact between the client and our team. He is responsible for coordinating meetings, as well as building a strong client relationship.

Bradley.Pike@lethbridgecollege.ca



ROBEE LOU DIAZ

BACK END DEVELOPER LEAD

Robee Lou Diaz is responsible for the development of our system. He specializes in programming and coding. Robee guarantees our project concept comes to life.

Robee.Lou.Diaz@lethbridgecollege.ca



IRAH LORETO

HARDWARE SPECIALIST

Irah Lorteo specializes in hardware related tasks. He focuses on the technical side of the system ensuring everything runs smoothly.

Irah.Loreto@lethbridgecollege.ca



NATE LAPOINTE

TEAM LEAD

Nate Lapointe guides the team by ensuring that all members are on track with the client's goals. He is also first to resolve any team conflict.

Nathan.Lapointe@lethbridgecollege.ca



WANATDA PHENGPHONEKEO

DOCUMENTATION LEAD

Wanatda Phengphonekeo handles documentation. She is responsible for project reports, project updates, UX design, and documentation between the client.

Wanatda.Phengphonekeo@lethbridgecollege.ca

Stephen Graham is our client.

He is a long time instructor at the Lethbridge College who teaches courses for the Computer Information Technology program.

More specifically, he is in charge of managing the practicum program for his students in the CIT 2271 – Field Work course.

Stephen's Business involves connecting students with employers for co-op work experiences, managing agreement forms, timesheets, and self evaluations.

Our team, Solution Seekers, have been given the opportunity to work closely with Stephen to develop a practicum tracking system tailored to his business needs.



3000 College Dr. S, Lethbridge, AB T1K 1L6

Stephen.Graham@lethbridgecollege.ca

403-320-3200 ext. 5794

MILESTONE 10 OVERVIEW

Welcome to Milestone 10!

This is the final milestone where we get everything up and running on our client's hardware and make sure they're all set to use our CIT Practicum Management System.

Here is a brief overview of some other things you can expect to find throughout this document:

- **Implementation Plan:** We've laid out a plan on when we'll install the software, and if our team will be integrating existing data into the new system.
- **Implementation Paper:** A short paper written on our implementation process.
- **Training Paper:** A short paper written on the training process with our client

IMPLEMENTATION PLAN

The implementation plan is all about setting up the final steps for getting our software running on the client's computer.

PREVIOUS DATA

How we'll move existing data over to the new system.

IMPLEMENTATION "TYPE"

The "type" of implementation that will take place.

POTENTIAL ISSUES

Address any underlying issues that may arise.

SCHEDULING

Confirm the date the implementation and training is to take place

What are some potential challenges that could arise during the implementation process?

- ✓ Potential difficulty with managing many user accounts.
- ✓ Slow access with the VPN.
- ✓ Client finds the system hard to use.
- ✓ Problems integrating existing data into the current system.

What are our plans with integrating existing data into the new system?

- ✓ We will not be importing any existing data into our clients new system.

What is our Implementation “Type”?

- ✓ We will not be importing any existing data into our clients current system.

Have we confirmed the date the implementation and training is to take place?

- ✓ Yes, we have confirmed to hold this meeting on April 19, 10am - 12pm in room CE2306.

Implementation Overview

This report gives details of the software solution designed for Stephen Graham, its implementation, and hosting choices with rationale. The target users would-be students, administrators, and employers. One of the biggest challenges to our process was the fact that some security protocols were interfering with our hosting plan.

Initial Consultation

The implementation journey was kicked off with a meeting with the Information Technology Services (ITS) Department of Lethbridge College. Our focus was mainly on the pre-delivery phase of our project. The project itself is designed to cater to three different types of users: Students, Administrators, and Employers.

Issue Identification

During the first discussion, a critical problem popped up. The ITS Department had told us that, according to their policy, no external connectivity is to be made for any person not located in the place of the organization. This introduced a problem with the Employer User Type since they required access from outside the campus.

Following the complication with the ITS, we took our issues to Terry, from the Computer Information Technology (CIT) Department. According to what Terry advised, we must use CIT-provided Virtual Machines (VMs) accessed over a Virtual Private Network (VPN) during the development. This implies that we could go on with the development without having sorted out the hosting issue at that point.

Client Involvement and Decision

After much thought about what was on the table, we deliberated with our client on the hosting situation. It was arrived at that the duty to host the site was going to rest on the client. It is not clear as to what the final hosting was all about at the end of this exercise, but it was expected that the customer would host from either a single PC or make use of CIT's infrastructure with their VMs.

Conclusion and Future Actions

The successful development of the implementation was done with temporary arrangements, so the bottlenecks were overcome initially. Further action will be done when finalizing the hosting arrangements with the client; make sure they are well versed in all required information and resources to enable him to keep and run the software effectively in place.

SOFTWARE REQUIREMENTS

Data Storage: MSSQL, Hosted on Server

Data Access Logic (the processing required to access data/database queries): SQL, Hosted on Server

Application Logic: Hosted on client

Presentation Logic: Hosted on client

Operating System: Windows 10



HARDWARE REQUIREMENTS

Client computers: Laptops, PCs.

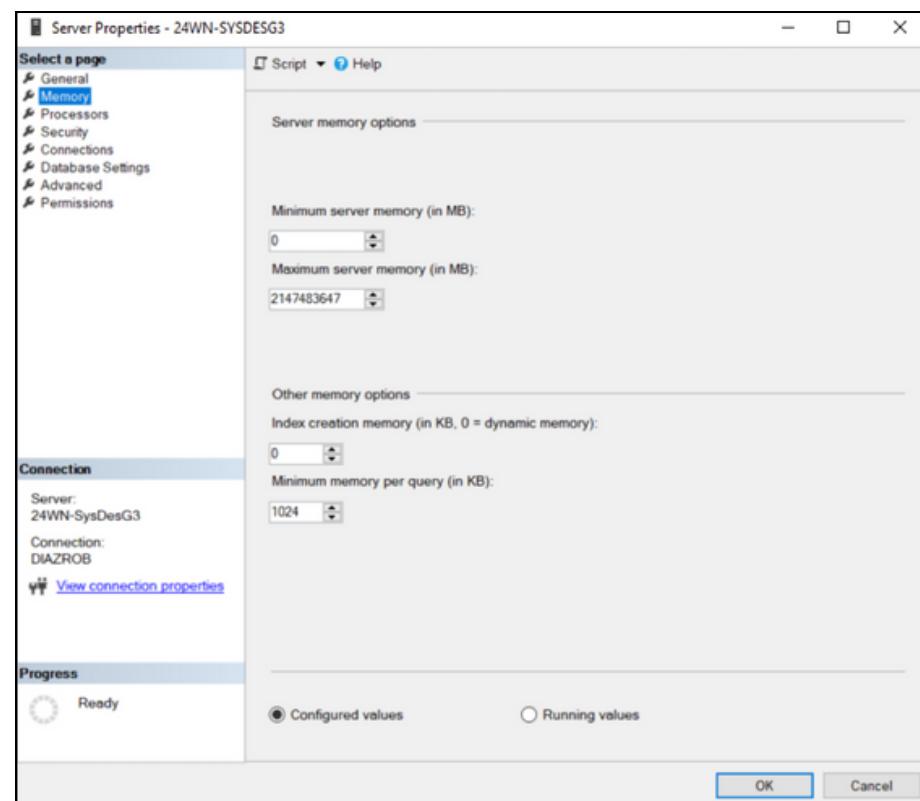
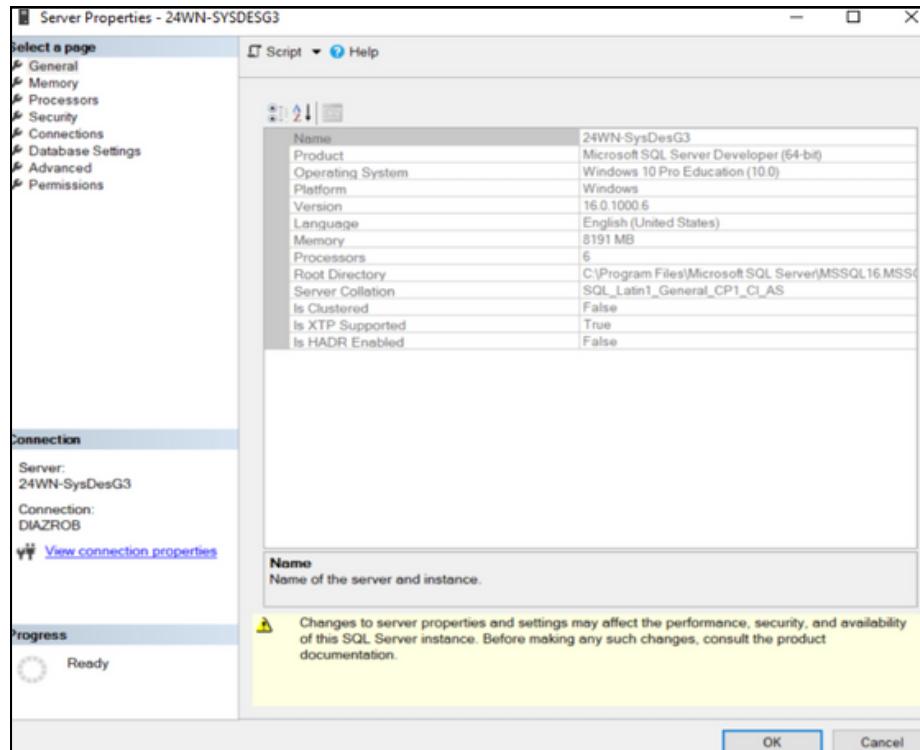
Servers: Windows Server 2019, College Servers

Network: WAN and LAN

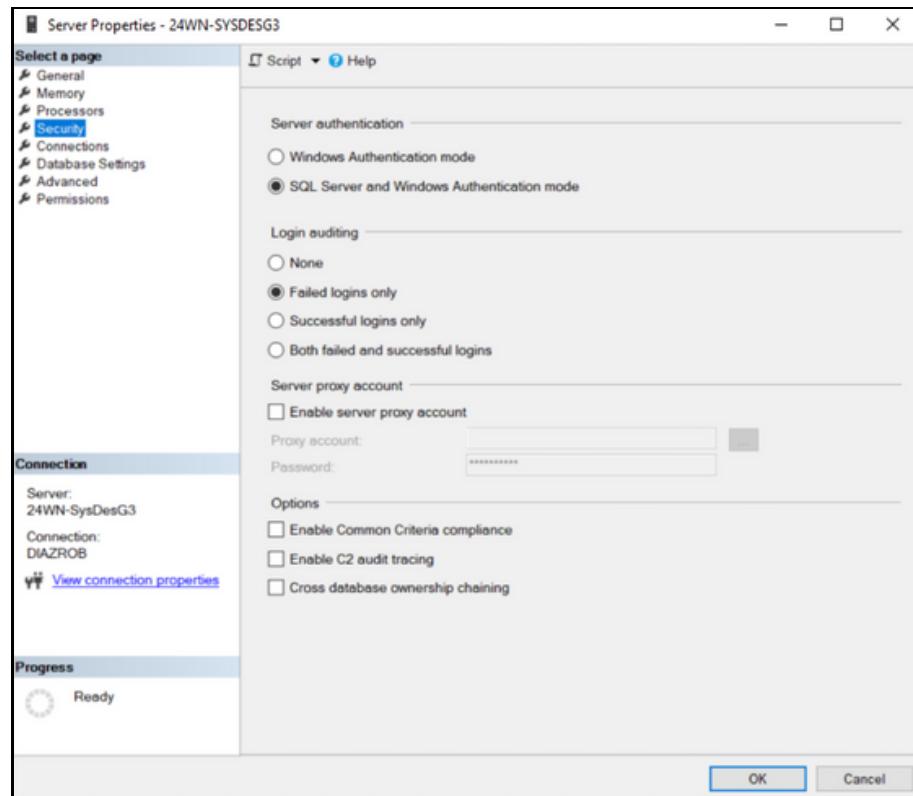
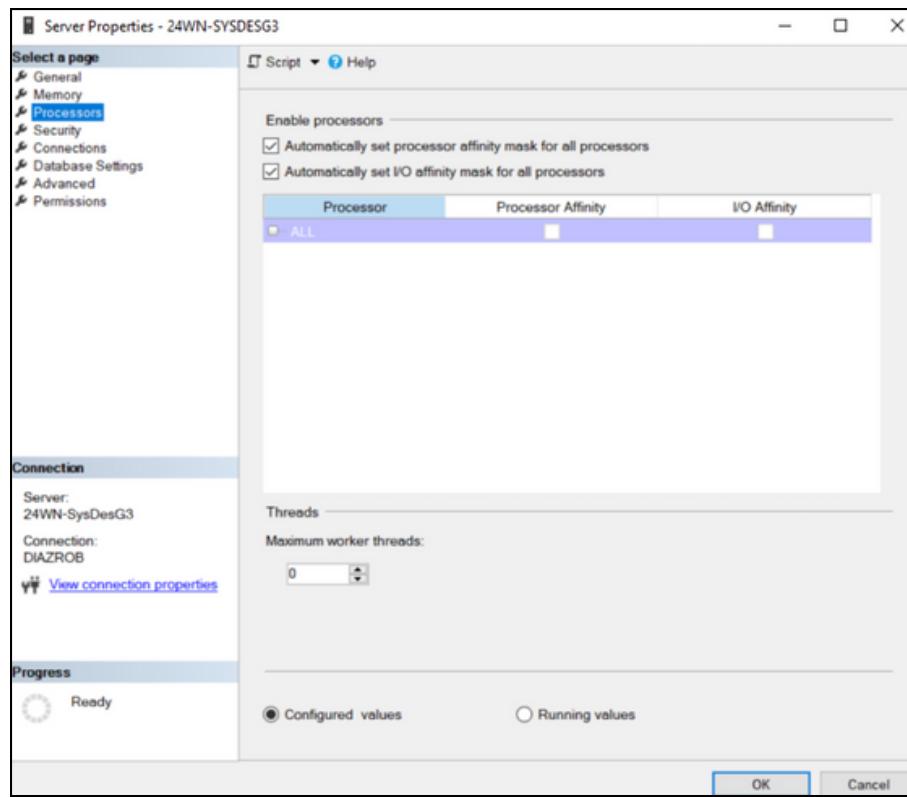
2 CPU Cores, 4–8GB RAM, 256 GB storage capacity

DATABASE CONFIGURATION

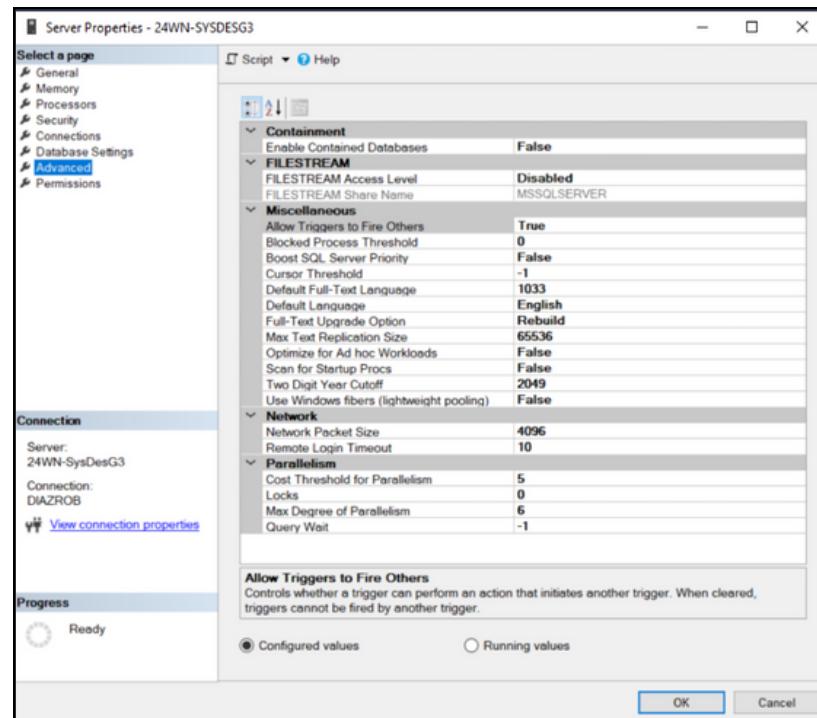
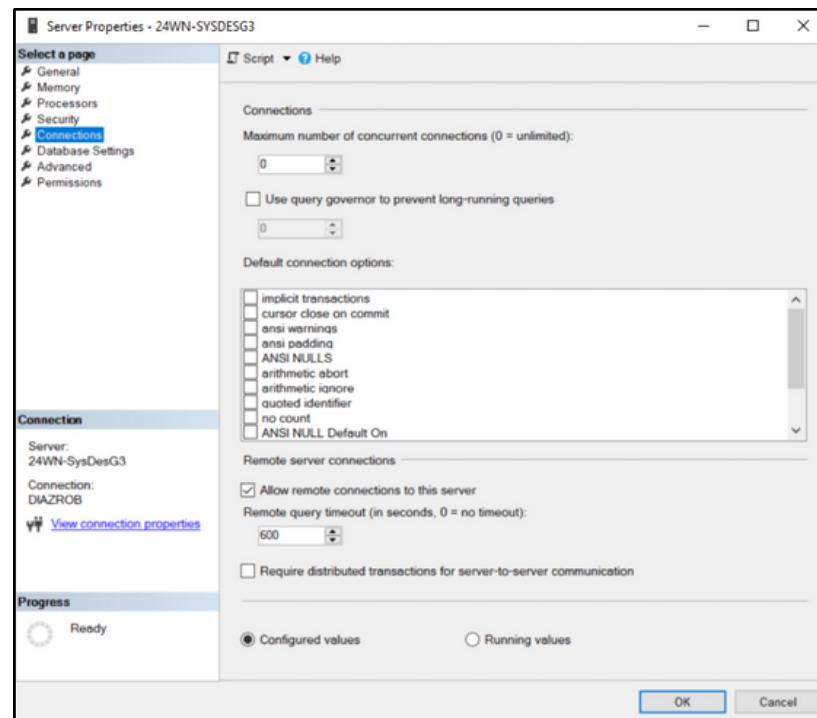
Server Properties



Server Properties



Server Properties



Server Properties

Server Properties - 24WN-SYDSESG3

Select a page: [Script](#) [Help](#)

Logins or roles:

Name	Type
##MS_AgentSigningCertificate##	Login
##MS_PolicyEventProcessing_login##	Login
##MS_PolicySigningCertificate##	Login
##MS_PolicyTagExecution_login##	Login
##MS_SmrtExtendedSigningCertificate##	Login
##MS_SQLAuthenticatorCertificate##	Login
##MS_SQLReplicationSigningCertificate##	Login
##MS_SQLResourceSigningCertificate##	Login
24WN-SYDSESG3\student	Login
DAZROB	Login
NT AUTHORITY\SYSTEM	Login
NT SERVICE\MSSQLSERVER	Login
NT SERVICE\SQLSERVERAGENT	Login
NT SERVICE\SQLTELEMETRY	Login
NT SERVICE\SQLWriter	Login
NT SERVICE\Winmgmt	Login
public	Server role

Permissions for ##MS_AgentSigningCertificate##:

Explicit Effective

Permission	Grantor	Grant	With Gr...	Deny
Administrator bulk operations		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any availability group		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any connection		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any credential		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any endpoint		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event notification		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session add ...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session add ...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session drop ...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session drop ...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session enable		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any event session option		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any linked server		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any login		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any server audit		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter any server role		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter resources		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter server state		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter settings		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter trace		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Connection:

Server: 24WN-SyDesG3
Connection: DAZROB

[View connection properties](#)

Progress:

Ready

Server Properties - 24WN-SYDSESG3

Select a page: [Script](#) [Help](#)

Logins or roles:

Name	Type
##MS_AgentSigningCertificate##	Login
##MS_PolicyEventProcessing_login##	Login
##MS_PolicySigningCertificate##	Login
##MS_PolicyTagExecution_login##	Login
##MS_SmrtExtendedSigningCertificate##	Login
##MS_SQLAuthenticatorCertificate##	Login
##MS_SQLReplicationSigningCertificate##	Login
##MS_SQLResourceSigningCertificate##	Login
24WN-SYDSESG3\student	Login
DAZROB	Login
NT AUTHORITY\SYSTEM	Login
NT Service\MSSQLSERVER	Login
NT SERVICE\SQLSERVERAGENT	Login
NT SERVICE\SQLTELEMETRY	Login
NT SERVICE\SQLWriter	Login
NT SERVICE\Winmgmt	Login
public	Server role

Permissions for ##MS_AgentSigningCertificate##:

Explicit Effective

Permission	Grantor	Grant	With Gr...	Deny
Alter trace		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authenticate server		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create any database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connect SQL	sa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Control server		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create any database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create any event session		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create availability group		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create CDC event notification		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create endpoint		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create login		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create server role		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create trace event notification		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop any event session		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External access assembly		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impersonate any login		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select all user securities		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsafe assembly		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View any cryptographically s...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View any database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View any publication		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Connection:

Server: 24WN-SyDesG3
Connection: DAZROB

[View connection properties](#)

Progress:

Ready

Database Properties

Database Properties - CTPracticum

Select a page: General Filegroup Options Change Tracking Permissions Extended Properties Mirroring Transaction Log Shipping Query Store

Script Help

Database name: CTPracticum

Owner: SAWN-SYD05\student

Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Size (MB)	Autogrowth / Maxsize	Path	File Name
CTPracticum	ROWS	PRIMARY	72	By 64 MB, Unlimited	C:\Program Files\Microsoft SQL Server\MSSQL16.MSOLSERV\MSSQL...	CTPracticum.mdf
CTPracticum	LOG	Not Applicable	72	By 64 MB, Limited to 1024 MB	C:\Program Files\Microsoft SQL Server\MSSQL16.MSOLSERV\MSSQL...	CTPracticum_log.ldf

Database Properties - CTPracticum

Select a page: General Filegroup Options Change Tracking Permissions Extended Properties Mirroring Transaction Log Shipping Query Store

Script Help

Filegroups

Rows

Name	Files	Read-Only	Default	Autogrow All Files
PRIMARY	1		<input checked="" type="checkbox"/>	<input type="checkbox"/>

FILESTREAM

Name	FILESTREAM Files	Read-Only	Default
FILESTREAM Files			

Database Properties - CTPracticum

Select a page: General Filegroup Options Change Tracking Permissions Extended Properties Mirroring Transaction Log Shipping Query Store

Script Help

Advanced

Auto Create	False
Auto Create Transaction Log	False
Auto Create Statistics	True
Auto Shrink	False
Auto Shrink Statistics	False
Auto Update Statistics Asynchronously	False
Collation	Latin1_General_CI_AS
Delayed Durability	OFF
Delayed Durability Configuration	OFF
Leaves Cardinality Estimation	PRIMARY
Leaves Cardinality Estimation For Secondary	0
Max DOP	2
Max DOP For Secondary	2
Parameter Sniffing	ON
Parameter Sniffing For Secondary	ON
Quota	OFF
Query Optimizer Falsy Secondary	OFF
RECOVERY	Full
FILESTREAM Directory Name	PRIMARY
FILESTREAM Non-Transactional Access	OFF
Language	Latin1_General_CI_AS
Allow Snapshot Isolation	False
ANSI NULLS Enabled	False
ANSI Padding Enabled	False
ANSI QUOTING Enabled	False
Arithmetic Abort Enabled	False
Case Insensitive Collation	False
Cross-database Ownership Check Enabled	False
Delayed Column Store Creation Enabled	False
Delayed Durability	Disabled
Delayed Transaction Snapshot On	False
Disallow Fulltext	False
Forwarded Data	False
Full-text Catalogs Enabled	False
Recoverable Triggers Enabled	False
Triggers	True
UseDecimal Storage Format Enabled	False
Page Verify	Simple
Target Remains True (Normal)	True
Auto Close	CHECKSUM

Connections

Server: SAWN-SYD05\student

Connection: DIAZKOB

New connection properties

Progress

Ready

Database Properties

Database Properties - CTPracticum

Select a page: General, Files, Filegroups, Options, Change Tracking, Permissions, Extended Properties, Mirroring, Transaction Log Shipping, Query Store.

Server name: 24WN-SysDesG3
Database name: CTPracticum
Users or roles:
Name: DAZROB
public

Permissions for DAZROB:
Explicit Effective

Permission	Grantor	Grant	With Gr...	Deny
Alter Database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alter Log Reader Agent Configuration		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authenticate		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backup Database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backup Log		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Checkpoint		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connect		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connect Replication		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connect	dbo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Control		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Aggregate		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Any Database Event Listener		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Assembly		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Asymmetric Key		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Certificate		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Contract		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Database DDL Event Listener		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Default		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create External Language		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create External Library		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Fulltext Catalog		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Connection: Server: 24WN-SysDesG3, Connection: DAZROB
View connection properties

Progress: Ready

Database Properties - CTPracticum

Select a page: General, Files, Filegroups, Options, Change Tracking, Permissions, Extended Properties, Mirroring, Transaction Log Shipping, Query Store.

General: Recovery Mode (Adaptive), Operation Mode (Requested)
Monitoring: Data Flush Interval (Minutes): 15, Read/write: 1 Hour
Query Store Retention: Max Plans Per Query: 200, Max Size (MB): 1000, Auto, Steal Query Threshold (Dels): 30, Wait Statistics Capture Mode: On
Query Store Capture Policy: Eldest Comp, Steal Threshold, Total Compile CPU Time (ms), Total Execution CPU Time (ms)

Data Flush Interval (Minutes): The frequency at which query store data is flushed and persisted to disk.

Current Disk Usage:

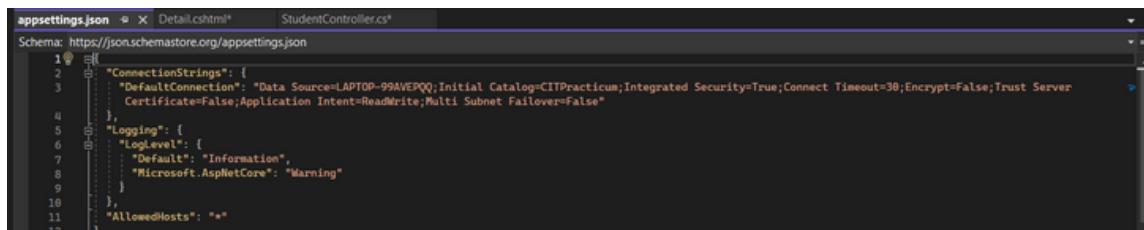
CTPracticum	139.0 MB
Query Store Used	5.0 MB
Query Store Available	995.0 MB
Query Store Used	5.0 MB

Connection: Server: 24WN-SysDesG3, Connection: DAZROB
View connection properties

Progress: Ready

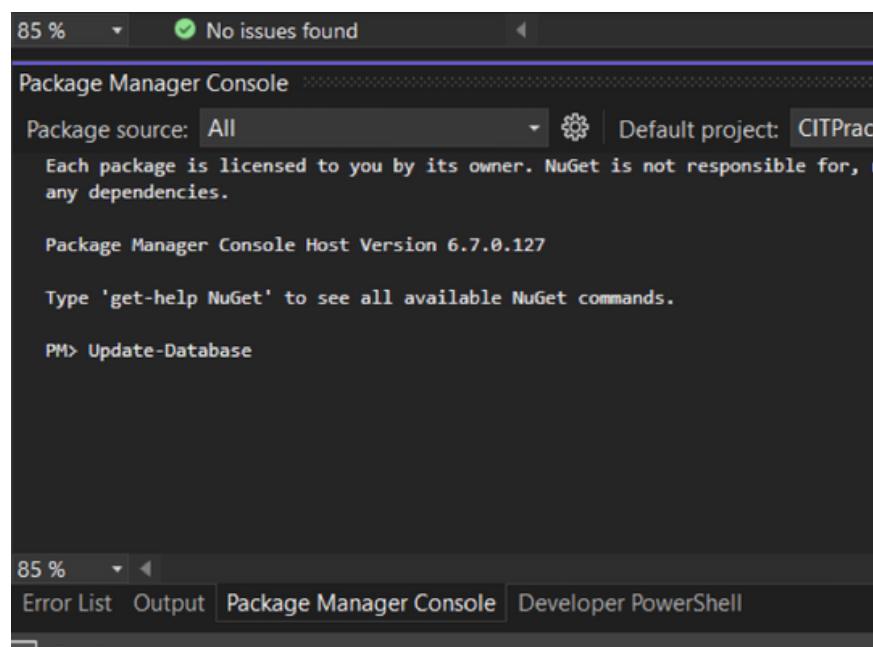
DATABASE CREATION

1. Change appsettings.json connection string



```
appsettings.json * Detail.cshtml* StudentController.cs*
Schema: https://json.schemastore.org/appsettings.json
1 {
2     "ConnectionStrings": {
3         "DefaultConnection": "Data Source=LAPTOP-99AVEPQ0;Initial Catalog=CITPracticum;Integrated Security=True;Connect Timeout=30;Encrypt=False;Trust Server Certificate=False;Application Intent=ReadWrite;Multi Subnet Failover=False"
4     },
5     "Logging": {
6         "LogLevel": {
7             "Default": "Information",
8             "Microsoft.AspNetCore": "Warning"
9         }
10    },
11    "AllowedHosts": "*"
12 }
```

2. In Package Manager Console enter Update-Database



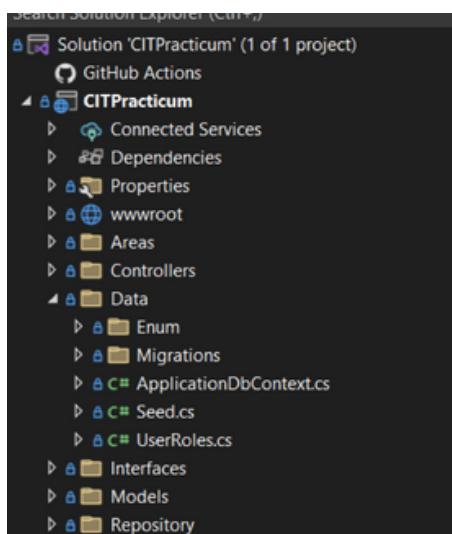
```
85 % No issues found
Package Manager Console
Package source: All Default project: CITPracticum
Each package is licensed to you by its owner. NuGet is not responsible for, nor
any dependencies.

Package Manager Console Host Version 6.7.0.127

Type 'get-help NuGet' to see all available NuGet commands.

PM> Update-Database
```

3. Update Seed.cs file

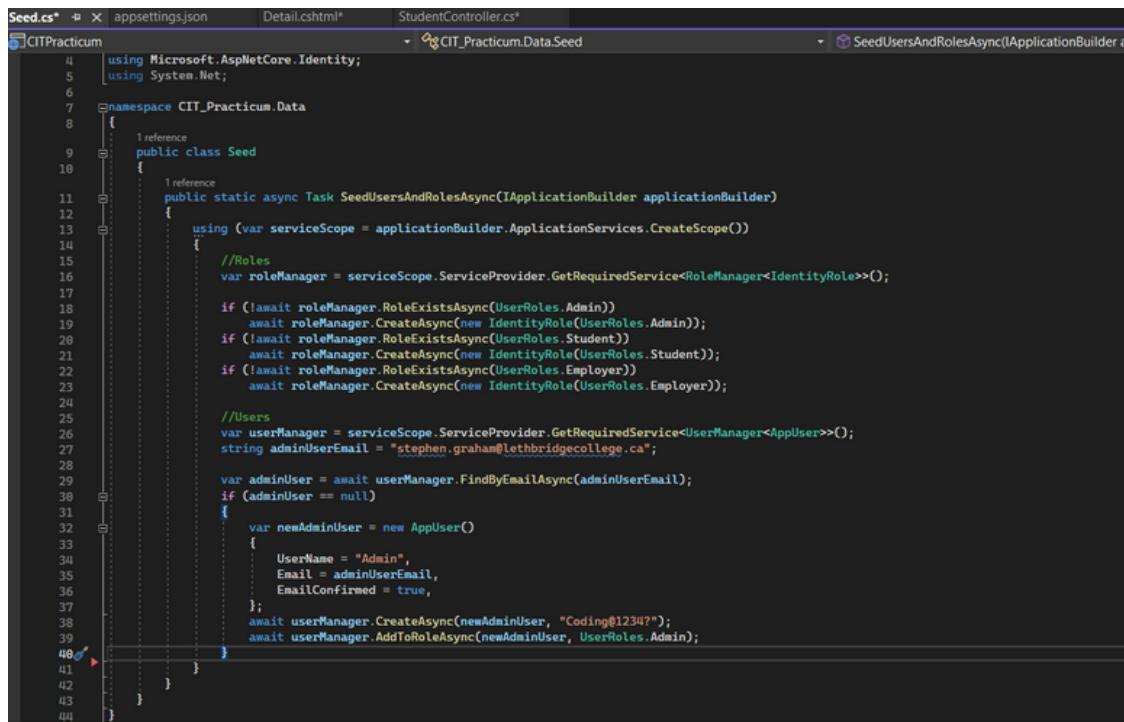


```
Search Solution Explorer (Ctrl+F)
Solution 'CITPracticum' (1 of 1 project)
GitHub Actions
CITPracticum
    Connected Services
    Dependencies
    Properties
    wwwroot
    Areas
    Controllers
    Data
        Enum
        Migrations
        ApplicationDbContext.cs
        Seed.cs
        UserRoles.cs
    Interfaces
    Models
    Repository
```

SEEDING PROCESS

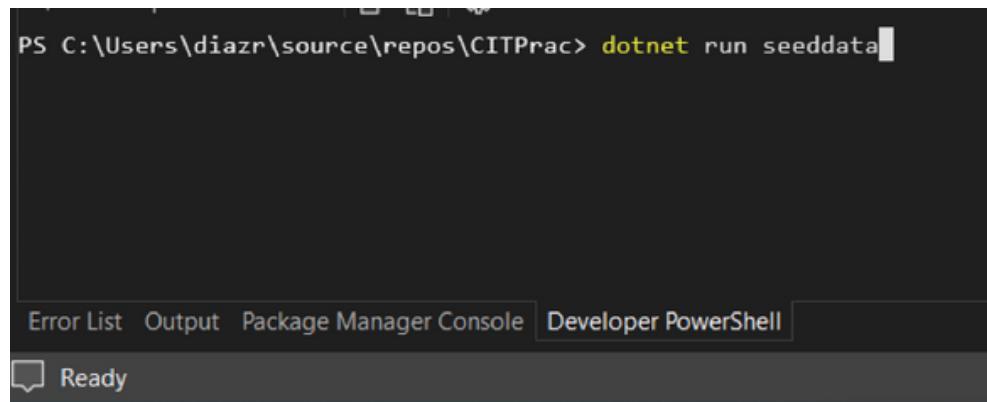
Change the adminUser email and password to set initial credentials of admin

```
string adminUserEmail = "test@lethbridgecollege.ca";
await userManager.CreateAsync(newAdminUser, "Coding@1234?");
```



```
Seed.cs*  X  appsettings.json      Detail.cshtml*      StudentController.cs*
CITPracticum                                         CIT_Practicum.Data.Seed
4   using Microsoft.AspNetCore.Identity;
5   using System.Net;
6
7   namespace CIT_Practicum.Data
8   {
9       public class Seed
10      {
11          public static async Task SeedUsersAndRolesAsync(IApplicationBuilder applicationBuilder)
12          {
13              using (var serviceScope = applicationBuilder.ApplicationServices.CreateScope())
14              {
15                  //Roles
16                  var roleManager = serviceScope.ServiceProvider.GetRequiredService<RoleManager<IdentityRole>>();
17
18                  if (!await roleManager.RoleExistsAsync(UserRoles.Admin))
19                      await roleManager.CreateAsync(new IdentityRole(UserRoles.Admin));
20                  if (!await roleManager.RoleExistsAsync(UserRoles.Student))
21                      await roleManager.CreateAsync(new IdentityRole(UserRoles.Student));
22                  if (!await roleManager.RoleExistsAsync(UserRoles.Employer))
23                      await roleManager.CreateAsync(new IdentityRole(UserRoles.Employer));
24
25                  //Users
26                  var userManager = serviceScope.ServiceProvider.GetRequiredService<UserManager<AppUser>>();
27                  string adminUserEmail = "stephen.graham@lethbridgecollege.ca";
28
29                  var adminUser = await userManager.FindByEmailAsync(adminUserEmail);
30                  if (adminUser == null)
31                  {
32                      var newAdminUser = new AppUser()
33                      {
34                          UserName = "Admin",
35                          Email = adminUserEmail,
36                          EmailConfirmed = true,
37                      };
38                      await userManager.CreateAsync(newAdminUser, "Coding@1234?");
39                      await userManager.AddToRoleAsync(newAdminUser, UserRoles.Admin);
40                  }
41              }
42          }
43      }
44  }
```

Dotnet run seeddata to load the admin user.



```
PS C:\Users\diazr\source\repos\CITPrac> dotnet run seeddata
```

The output of the command shows the seeding process:

```
Creating role Admin
Creating role Student
Creating role Employer
Creating user Admin
Email: stephen.graham@lethbridgecollege.ca
UserName: Admin
EmailConfirmed: True
Password: Coding@1234?
Role: Admin
```

HOSTING DETAILS

Host Name & URL:

Lethbridge College

Credentials:

172.22.2.117

Password1

TRAINING PAPER

The training session for the practicum tracking system was with Stephen Graham, our client from Lethbridge College, who is involved in managing the practicum program for students in the Computer Information Technology program. The session focused on one-on-one training, providing Stephen with an opportunity to interact directly with the different facets of the system admin, student, and employer interfaces

Our Thoughts

We held the training in a really hands-on way, which was perfect for letting Stephen dive into every part of the new system. He got to mess around with the admin, student, and employer interfaces, which really helped him get the hang of things fast. By trying out different actions like adding a new employer or setting up job posts, he could immediately see how things worked, boosting his confidence in the system he has always dreamed of. We walked him through everyday scenarios he'd likely face on a daily basis, which made the learning stick. He practiced tasks like entering data as an admin, sorting out applications as an employer, and keeping track of hours as a student. This wasn't just about showing him the ropes, it was about making sure he could connect the dots between the system's features and his daily work. As he explored, Stephen gave us on-the-spot feedback if something wasn't clear or if a part of the workflow could be smoother. We used his insights right away to tweak things that may not have been working properly and planned a few updates based on his suggestions. It was all about adapting the system to fit his needs better. We didn't just leave him to figure everything out on his own. Part of our session was dedicated to solving common problems and showing him how to get help when needed. This way, he wouldn't feel stuck once he started using the system on his own.

Client Feedback

Stephen really got into the swing of things during our training session and didn't hold back on the feedback, which was perfect for making quick tweaks..He had some spot-on suggestions, like putting in breadcrumb navigation to help users not lose their place, and introducing a cloning feature for job posts to make archiving way easier. He also thought it'd be nice to tag new forms with a "New" label to make them stand out, and he wanted us to clear up some of the wording like switching "Edit Entry" to "Save" and changing "Cover Letter" to "Work Preference." He even pointed out that we should make it clear for students to only upload resumes as PDFs. Stephen's insights were super helpful for polishing the system. He absolutely loved how it was turning out—giving it a solid 10/10 and was super excited to start using it in his daily grind

Conclusion

Overall, the training session with Stephen was not only productive but also enlightening. His hands-on involvement and proactive feedback have been crucial in fine-tuning the practicum tracking system to meet real-world needs effectively. His enthusiasm and the positive review he gave the system reaffirmed our commitment to delivering a tool that truly enhances the management of practicum programs. As Stephen prepares to integrate this system into his daily operations, we're confident that it will make a significant positive impact, simplifying complex processes and improving the experience for administrators and students alike. We look forward to seeing how this system evolves with Stephen's expert use and ongoing input.

THANK YOU

April 19, 2024

Dear Mr. Stephen Graham,

On behalf of Solution Seekers we thank you for choosing our team to represent you and your business needs.

We are so thrilled to embark on this 6 month long journey with you to transform this project into reality!

To acknowledge your understanding of the contents in this document, please sign below.

We look forward to working closely with you to ensure a successful project.

X

Stephen Graham

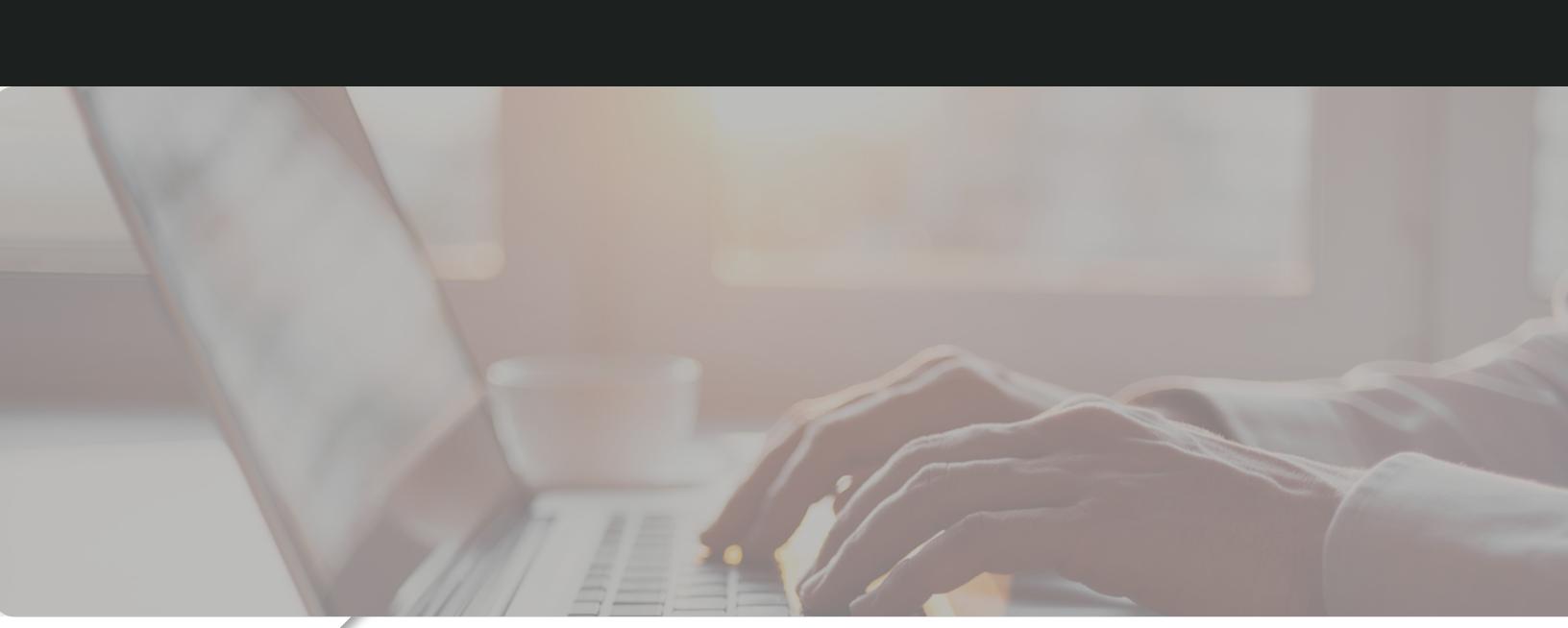
SOLUTION SEEKERS

LESSONS LEARNED

SOLUTION SEEKERS 

PREPARED BY

Wanatda Phengphonekeo, Robee Lou Diaz,
Bradley Pike, Nate Lapointe, Irah Loreto



INTRODUCTION

CANVA

For our documentation we have chosen to use Canva to record all of our Lessons Learned.

Each member will be sent a shared link, from there they will be able to contribute to the document.

Every team member is encouraged to participate.

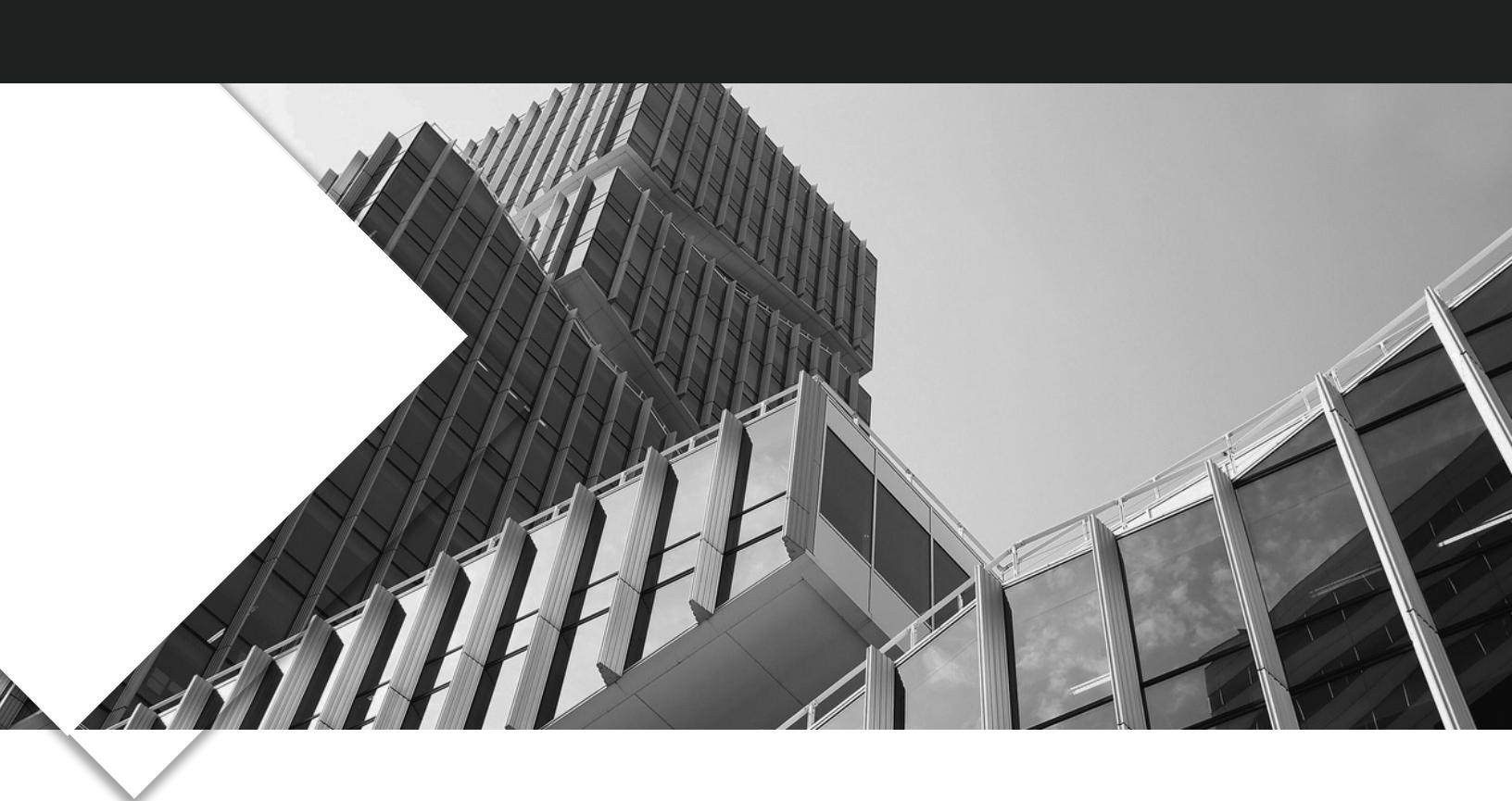


WELCOME

At Solution Seekers, we invite you to view our Lessons Learned document. This document is a reflection of our team's experiences throughout the semester.

Lessons Learned will allow us to identify what went well, and what challenges we faced throughout our project. Ideally we want to avoid repeating mistakes, identify successful practices, as well as improve our overall team work skills.

We realize it's important to collectively learn from our successes and mistakes to ensure a healthy teamwork environment, and serve as a self reflection.



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TEAM MEMBERS 2023

STAFF



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Irah Loreto

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KEY TAKEAWAYS

**For reference, below is a brief and visual description of what the Lessons Learned document will consist of.*



DATE

Each member must enter the date starting in order from DD/MM/YY



ENTERED BY

Enter the name of the group member submitting their Lesson.



MILESTONE

Indicate the Milestone number that the Lesson centres around.



LESSON

Include a brief description of the lesson that was learned in that specific Milestone

KEY TAKEAWAYS

LESSON TYPE



Imply whether the lesson was an academic, personal, or technical issue. Be sure to keep it short and concise when deciding on the lesson type.

IMPACT



Discuss the impact of the Lesson that was submitted. What was the impact on your team? How has it impacted your personal experience? Feel free to elaborate.



RECOMMENDATION / COMMENTS

Record any key areas that may need to be improved on. Express any growth or achievements. Or perhaps suggest any changes that need to be addressed.

Date DDMMYYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
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* Template for reference



AVOID REPEATED EXPERIENCES

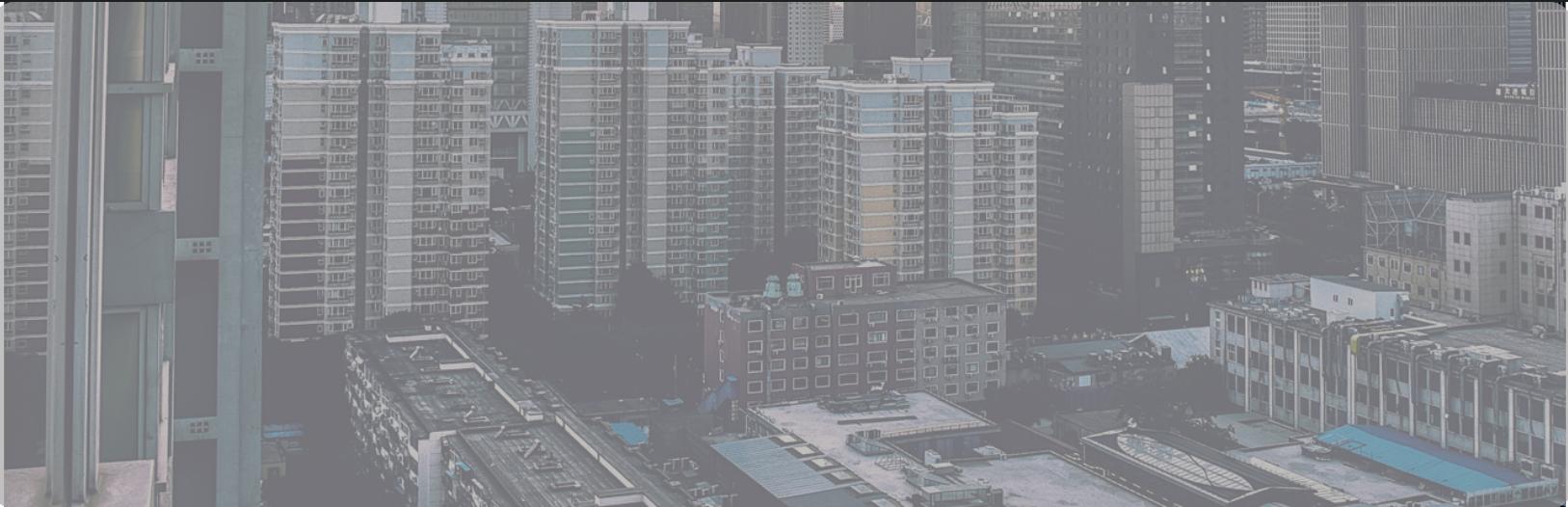
When a team member describes their experience, here are a few topics to consider to help avoid repetition. Each lesson should be a unique experience of itself.

- Communication
- Time Management
- Client Needs
- Quality Assurance
- Decision-Making
- Adaptability

IMPROVE TEAM PERFORMANCE

As a team, we are committed to incorporating all experiences into our project. This is an ongoing learning experience, and we plan to improve our team performance using methods such as:

- Additional Training: Spending the time to improve any skills in areas that our team needs.
- Time Management: Understanding the importance of deadlines and work contribution.
- Problem-Solving: Addressing concerns in our project early on in order to resolve solutions quickly.
- Effective Communication: Each member showing up and participating with frequent check-ins.



CONCLUSION

Each Milestone will have all team members contributing to the Lessons Learned document.

It's important to follow the template layout for proper procedure. Everyone's experience must be unique, and not a repeat of previous lessons.

Milestones will have new experiences that members may not be familiar with. These could be learning new software, coding languages, or working with unfamiliar charts and graphs.

Altogether we plan to review our lessons and share solutions on issues that need improvement, or achievements that deserve recognition.

We welcome you to follow along on our Lessons Learned journey!



LESSONS LEARNED

Date	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
04/16/2024	Wanatda	10	<p>Happy to have kept pushing forward to build an amazing, working system for Stephen. Truly didn't think we could come as far as we could with only a couple months of coding.</p> <p>Extremely proud of my group members for coming together throughout these 9 months without falling apart! 😊</p>	Personal	Personal growth and friendship!!!!!!!	
04/16/2024	Irah	10	I could not have asked for a better squad. Very happy with the teams accomplishments. Through out the entire year	Personal	The path to become champion starting from the bottom ranks. My growth has raised exponentially just like bitcoin stock market. Friendship and personal growth	
04/16/2024	Nate	10	I am very fortunate to have had this group for this whole year and i could not have asked for better people to work with. They made this project enjoyable!	Personal	Made new friends and i hope its for life!	
04/19/2024	Brad	10	Super proud of how far our team has come! Our final product is way better than I could've ever imagined! On top of that our presentations blew me out of the water! So grateful for this team!	Personal	A lot of personal and professional growth. I would be honoured to work with any of these groupmates in the future!	
04/19/2024	Robee	10	<p>Run on some problems with merging git because of changes in the migration which was done for the project turnover.</p> <p>Our team has come a long way starting from a group formed by Tim who doesn't have a team. I truly believe our team is one of the best this year when it comes to the overall result of the project</p>	Personal	First time to work with people with different skills sets for a system	

LESSONS LEARNED

Date	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
04/05/2024	Wanatda	9	Structure out our training methods better. The training we did with Hexabridge felt sloppy on our end. Mostly because I didn't account for the fact that there were 6 members. Moving forward I've started planning out our training meeting with Stephen to go a lot more smoothly for next week.	Academic	The feedback forms from Hexabridge were honest and very helpful. We used their feedback to alter our training methods.	
04/05/2024	Robee	9	As we created the training manual and having users test our system, we found bugs and errors that can be fixed. Also, we received valuable feedback on improving the system and make it more user-friendly	Academic	Spend more time for user-tests and validations. Ask more people outside the group for testing.	
04/05/2024	Nate	9	Making the training plan, i learnt that you cant just make something up quick, you need to take some time to evaluate your project and make sure you create a proper training plan	Academic	With the help of the other team we tested, making sure we're more organized	
04/07/2024	Brad	9	Always be super early for personal deadlines so you can get feedback asap	Deadlines	On a couple occasions I've ran into issues where I get things done on time however there are changes that need to be made last minute. Although they were unforeseen it should always be a good rule of thumb to have them completed as early as possible so I can make changes as need be.	
04/05/2024	Irah	9	Doing user test and interacting with others to see how a theoretical user case would go. Understanding and putting myself into a outside persons shoes who is not tech savvy. Then creating and helping make a training plan based off.	Academic	Learning what worked in the training plan and making sure to implement those changes if needed.	

LESSONS LEARNED

Date	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
03/22/2024	Wanatda	8	I learned how easy it is to let scope creep get the best of our system. Even now I feel like we're adding in features and may have to cut some out. Since I focus on the front end I never realized how large of a scale Stephen's project. I'm really proud of my teams progress and I love seeing us achieve our milestones within the system.	Personal	<ul style="list-style-type: none"> • Communicating to Stephen ahead of time if there are features we have to cut. • 	
03/22/2024	Irah	8	Really getting into the meat and the bones of this project showed me wow, this is a big project. Teaching me some things are not possible within the scope and really problem solve some issues when coding.	Academic	I learned more on how this project will work. Including the controllers, learning more front end and seeing on how to fix problems. I also learned more on how to use git branches and drilled the git cmd commands into my brain.	
03/24/2024	Robee	8	This was one of the most interesting milestone for me. I have learned a lot in C#, ASP.NET, MSSQL Database that I can use as credentials for future developer applications. Every past lessons on coding, entity relationship diagram made more sense and clearer. Github, git and branching was very useful	Academic	<ul style="list-style-type: none"> • Plan Database connection properly. • Never be afraid to try and break the app. It can get fixed but make sure to use git/github. 	
03/24/2024	Nate	8	With the front end development learning some ways to make the styling easier by not typing all the same number for the colours instead naming them and calling in the name which i thought is much easier.	Academic	Learning new ways to style, format and just new things in the front end is my biggest impact i will take from this milestone	
03/24/2024	Brad	8	Learned that the UI can't just look good, it needs to work. I had to make a couple versions of the dashboard UI and it was a timely mistake on my end. I also need to communicate better with my team about technical issues before it's too late.	Academic	Continue to find bootstrap UI options that are functional.	

LESSONS LEARNED

Date	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
02/16/24	Wanatda	7	My lesson I learned this Milestone is I don't like creating physical DFD's. It's not my strongest suite. I really don't like the tiny details you have to think of when making a physical DFD. However, I found that structure charts were a lot more easier to understand.	Academic/Personal	Made a LOT of revisions. I spent time with Stephen and Tim to go over my DFD scraps. It definitely paid off because I have a really good understanding of the system and how big the project scope truly is.	
02/16/24	Robee	7	Creating a physical architecture is new for me. Knowing every part of the system is essential for any I.T. fields so this is really valuable. Using the proper software, hardware, architecture and required storage size seems easy but it is not. These are really important for the development.	Academic	Spent more time understanding the terms. Researching via google and details in the book.	
02/16/24	Nate	7	I learned a lot about the structure charts and how what is really supposed to go into them. I feel a lot more confident about them after the presenting them and also listening to the other groups about theirs.	Academic	presenting and listening to the other groups present helped me to understand the structure charts more, working on them for hours with my group helped a lot as well. Restarting and doing them over and over again gave me a more clear understanding.	
02/16/24	Irah	7	In creation of making the pseudo code I learned that there is a lot more to it in breaking stuff into parts. Is a certain action will be in one or should I split it into two. Creating pseudo code really help me understand the process of buttons and features way more.	Academic	I did changes every often when someone would make changes to the charts because my pseudo code is word form charts. I learned how to break a feature down into outputs and inputs. I also learned more from my team as I had to over there charts and compare learning about there parts such as structure charts and dfds.	
02/17/24	Brad	7	I learnt that I need to be more attentive to team messaging and working with the team to create achievable deadlines.	Academic	I found that my commitments hurt the teams progress in completing milestone 7 in a timely manner.	I need to set realistic deadlines and if I require "time off" I need to hold up my portion of the team workload

LESSONS LEARNED

Date	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
01/29/2024	Wanatda	6	I learned that I didn't dedicate enough time into understanding the material associated with this Milestone.	Academic	Felt like my lack of understanding was impactful during our presentation on Friday.	Going to put more time and preparation for our next in-class presentation.
0/29/2024	Bradley	6	I learnt that we need to have meetings more regularly with our team so we're on the same page.	Academic	It reflected in our presentation grade and our overall knowledge of the project.	

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
07/12/2023	Wanatda	5	I know we lightly dived into feasibility in Milestone 1, but Milestone 5 felt pretty comprehensive. There was lots of information that needed to be considered when coming up with the details. I feel like I have a good enough understanding of feasibility than what I did beforehand. But with our project being a college one, it was difficult to navigate what our organizational & economic feasibility consists of.	Academic	Deeper understanding of the system in terms of getting our hosting situated and learning about our software and hardware, security, and long term sustainability with the project.	
8/12/2023	Nate	5	In milestone 5 I learned a little more about build vs buy comparisons. Feasibility is also something I learnt a little more of, really breaking down our own project doing it for ourselves helped me understand a lot more.	Academic	Having an idea of feasibility and build vs buy gives me a better understanding on our own project.	
8/12/2023	Irah	5	In milestone 5 I have learned and improved my power point presentation skills a lot. I always used Canva, learned how to do power point animations and really learned how to use small features and mechanics. In regards of work load I've really learned to spread work delegations more suited for my load of productivity.	Academic	I learned a more of how our system will work and what features, programs we will use on our project in order to work. Learned about what scope we will be working in as its mostly going to be ran internally and used internally after we manage to finish the project. Basically understanding the build of our project and things that will be implemented in order for it to work and be used for futures endeavours.	
8/12/2023	Robee	5	I learned a lot with comparing the differences of acquiring the system. Researching about off-the-shelf and outsourcing options, how to calculate which one is the best based on values and Weighted Alternative Matrix. Finally, creating recommendation based on these findings to propose the best solution.	Academic	It is definitely a must-know in developing system request. Reminded me that there are other options to build the system, based on time, resources and budget.	
08/12/2023	Bradley	5	In milestone 5 I was working on the budgeting part of the deliverable. Talking with ITS made me realize we missed some details like server costs and web certificate costs. Even things like licensing and consulting fees were costs I had to compare, which I have never done. Our project is limited to using Microsoft licensed software so that was something I had to work around.	Academic	I learned how challenging it can be when you have limitations to only use certain software and hardware. It felt like a real job situation having to deal with specific rules and limits. This project really impacted me and showed me how to manage these kinds of real-world challenges.	

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
14/11/2023	Wanatda	4	Wednesday after class I talked to Tim about our ERD. Initially I had created one, and just wanted his input on it. But after talking with Tim, we worked together to improve the ERD for our system. We ended up restructuring the ERD completely, and in the end I had a better understanding of our improved ERD than I had going in. This was so helpful because throughout this Milestone I really struggled with this.	Academic	I feel like our improved ERD is more fluid. The diagram is 10x easier to explain to others, and you can follow it very smoothly. If I had not gone to Tim for advice on our ERD, I think it would have impacted our understanding of our client's ERD.	
20/11/2023	Nate	4	I learnt a lot more about the business' rules, looking at the ERD and figuring out the business' rules defiantly took time and hearing what Tim had to say about them after the presentation helped a lot	Academic	Made a lot more sense with the whole project figuring all that out, with time explaining everything as well gave me a better understanding of everything	
20/11/2023	Bradley	4	Since the last milestone I'm staying a lot more accountable for my own work and making sure I'm prepared for the presentations.	Accountability	I've made a major improvement on clarity and general understanding of the project	
20/11/2023	Irah	4	I learned more on how to become design things better on PowerPoints and become more creative. Learned about ERD more in depth's through my group members and others as well. I became more consistent in my work and have improved my skill as well to benefit the group projects.	Academic	Our new chart is way easier to explain now. Thanks to Tim's advice, it's much clearer, and you can understand it way better. Plus, this taught me that getting feedback from others is important. I'm also trying to get better at making PowerPoint slides so I can explain things even more clearly in the future. Improving my skills for sure and will have better results creating and designing for the group.	
20/11/2023	Robee	4	The most notable lesson that I had on this milestone is creating a Data Dictionary. I tried creating a database before but I learned that having a well-organized and planned Data Dictionary makes the task a lot easier. I also discovered on how to improve wordings for Business rules that will match the Entities involved.	Academic	This will serve as our cornerstone for creating the application and database since we have an idea of information that we need and the metadata and limitations for each attribute.	

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milest one	Lesson	Lesson Type	Impact	Recommendation / Comments
27/10/2023	Wanatda	3	I learned how to make use cases! This was pretty simple to learn in class when we did examples, but when it came to actually integrating them into our project it took me awhile to figure out. Mostly because you have to go through every single step and determine "is it a feature? or is it a valid use case? what is considered pre/post condition?"	Academic	Understanding how to make Use Cases is really important for our team because I had to take into consideration stuff that I might not have accounted for. Not only for documentation sake, but also for when we start coding.	Spending the time to understand what the client wants before making a use case. Also ask for help.
29/10/2023	Robee	3	Review format of documents properly. Be more mindful on the details of deliverables. Communicate better with the team.	Personal	Missed out some specific formatting and properties of data flow diagram. Initiate team discussion for deliverables made for current milestone.	
30/10/2023	Bradley	3	Become more engaged with the project and get clarification when needed. I found myself less engaged due to a busy schedule however when I had free time I found myself focused on the wrong things. I found that creating the deliverables I didn't have a great understanding of the project and should've asked for clarification before the presentation.	Engagement	I found myself not being able to have as much perceived knowledge on the project as I stumbled on words and generally didn't have a great understanding of my portion of the presentation	Ask for help when needed
30/10/2023	Nate	3	During milestone 3 i learnt how taxing this whole process really is. There is a lot of work still ahead and i found having to remind myself to get my work done and to be on track with everything. Also learnt that asking questions to get out the right information and to do the work correct the first time.	Personal	The impact of having to remind myself to get my work done is big because that's time that i could have spent making the project better or brainstorming new ideas, things like that.	Understand the importance of everyday that we work on the project.
30/10/2023	Irah	3	I was in charge of working on the informal presentation. About a half our into it, my computer crashed and I forgot to save my progress. This really sucked because I had most of the slides done with animations and themes sorted out.	Technical	Lost a good portion of our groups presentation. Thankfully I was working on it a couple days before it was due, so I was able to recover most of it. All in all it just delayed me for a couple hours from completing it.	Always save your progress, or at least turn on the auto-save function.

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
08/10/2023	Wanatda	2	During the 1st Milestone I felt very rushed into completing all the deliverables. But since going into this 2nd one, I've been slowly adapting to the pace of the milestones. I have been trying to get deliverables done as far in advance and I can, but surprisingly I have not been feeling rushed like I did in the 1st Milestone.	Personal Achievement	I realize it's all about time management, which is something I am not necessarily bad at, but when it comes to GROUP time management, I've found ways to manage it a little bit better so that I'm not stressed. It's different when it's a group project and you have to rely on others for their part, as well as deliver yours in a timely matter.	Adopting better time management skills. Staying on track of Milestone deadlines.
10/10/2023	Brad	2	Throughout milestone one I found it very valuable to schedule group meetings all the time and just get working. It doesn't matter how much time your group mates have, as long as the work is getting done and we all understand the material that's all that matters. Work just needs to get done and I'd much rather be ahead of other groups then waiting for everyone to be available.	Delegation & Meeting Length	Within our 4th meeting we did double the work completed in the 3 meetings prior. This was a result of delegating tasks and meeting for longer periods of time and having group members come and go.	
10/10/2023	Robee	2	For milestone 2, I learned how to use MS Project for managing tasks and deliverables. Additional effort was needed to read the documentation and search the web on how to navigate and use it properly. Before, I thought Agile is just Scrum and Kanban but understanding other Agile methodologies to decide which one to use for our project was essential.	Technical	I am optimistic that our team can make improved recommendations. Become more organized individually and as a team with our project management with these tools and knowledge at hand.	Read documentations. Spend time to learn how to navigate new tools.
10/10/2023	Nate	2	During milestone one i shortly realized that having a schedule and organized plan with everyone in the group was a must and it made it a lot easier to keep track of everything and know what everyone is working on and completed.	Technical	Having a clear schedule and plan helps the group work better together and get things done faster. It also makes sure everyone knows their job and does it well.	Have a calendar and a list for to dos and priorities list for tasks.
10/10/2023	Irah	2	Lesson learned for Milestone 2 on what I have learned is that scheduling my working times to finish projects and assignments is very important. Same goes for Milestone 1. There was some days cramming in work for 10 hours made it easier if I just spread it out and did some things at better times. As well I got to understand more in depth on what my group is good at and what I can contribute to continuing our work.	Technical & Planning	The importance of effective time management and spreading out work over time to reduce stress and improve productivity. Additionally, gaining a better understanding of individual strengths within the group has enhanced collaboration and project contributions.	