Water In A Coffee Cup

WIACC

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Project Description

Background:
Solomon Consultants is a company that helps people reaching or at the age of 65 understand how Medicare advantage plans work, and educating them on the various available programs. Our team wanted to create a larger and more secure database for their clients' information, which would help with scalability and overall efficiency within the company.

Business Challenge and Opportunity:
The client is currently using an excel database to store client information, but due to the growing volume of clients, a larger database is needed.

Project Process:
Our team first sought out a client, Solomon Consultants. We met with the client to better understand their company and their needs. We then assessed our time and resource constraints and developed a plan to solve a problem for the company, which is to create a database using SQL. Next, we implemented the database using mock data to not risk exposing any personal client information. This was done to test that the database will work with their clients' real information. We then met with Solomon Consultants again to update them on what we created and request any feedback and general comments or concerns they had. We took their feedback into account, reassessed and made minor tweaks to better match their requirements, ensuring functionality. Lastly, we gained approval from Solomon Consultants.

Project Implementation:
Once Solomon Consultants implements the database and merges their current client database from Excel to SQL, they should be able to provide a more secure environment to store client information and grow their company. Since our client is not very familiar with SQL, we will give an initial introduction tutorial, and provide them with resources that will be helpful in case of any minor issues they might have. Will Solomon will also have direct contact with the client in the future and will provide any further training or guidance the client might need. The rest of our team will also actively help should the client have any problems for two months following the database implementation.

Desired Impact:
We want Solomon Consultants to improve the efficiency of their company, as well as help them protect their clients information. We hope this will help our client as their company expands and they gain more clients.

Project Scope

Scope Statement:

Solomon Consultants has agreed to implement an SQL database to securely manage client information, transitioning from Excel spreadsheets. This project aims to better operational efficiency, enable scalability, and strengthen client trust through improved data security and organization.

The Scope Encompasses:

- Understanding Solomon Consultants' current database infrastructure and requirements.
- Designing and implementing a SQL database structure tailored to the company's needs.
- Migrating existing client data from Excel to the new SQL database.
- Testing the database functionality with mock data to ensure reliability and security.
- Providing training and resources to Solomon Consultants for SQL database management.
- Offering post-implementation support for two months to address any issues or concerns.

In Scope Tasks:

Task description	Who is responsible	Due date
1. Conduct Stakeholder Review (1.2.6.1)	WIACC	2/20/2024
2. Build and Test Database	Database Developers: Will Solomon, Aum Patel, Pranay Patel	4/16/2024
3. Implementation with mock data	Database Developers: Will Solomon, Aum Patel, Pranay Patel	4/16/2024
4. Conduct Stakeholder Review (4.4)	Database Developers: Will Solomon, Aum Patel, Pranay Patel	4/19/2024
5. Final Adjustments (Final Presentation)	WIACC	4/23/2024
6. Hand-Over	WIACC	5/6/2024

Out of scope activities that are critical to the success of the project:

1. Custom software development
2. Helping Solomon Consultants with the SQL database post implementation.

Measurable Organizational Impact

Cost Benefit Analysis

Tangible Benefits:

Benefit	Value & Probability	Assumptions Driving Value
Increased Efficiency	High value of 90% High probability of 95%	By implementing a new database system, company owners can focus on higher-value tasks, rather than focusing on timely tasks, which will increase overall productivity and efficiency.
Enhanced Data Security	High value of 85% High probability of 90%	Transferring from Excel to a SQL database will provide better access controls and backup capabilities, which will reduce the risk of any data breaches.
Scalability	High value of 85% Medium Probability of 80%	The SQL database will provide more scalability, which will accommodate the growing number of clients, allowing for business expansion and growth.

Intangible Benefits:

Benefit	Value & Probability	Assumptions Driving Value
Improved Client Trust	High value of 95% High probability of 95%	Implementing a more secure and reliable database will allow for more trust between the company and the clients as their personal information will be stored more securely. The company will also demonstrate commitment to protecting their clients information.
Better Decision Making	Medium value of 70% Medium probability of 75%	Using the SQL database and data model enables the company to visualize the data better, which will allow them to make better and more informed decisions in the future.

Cost Categories:

Category	Internal Labor Hours	External Costs
Labor	125-150 Hours Per Member	$10,000
Equipment/Software	N/A	$3,000
Training	30 hours	$2,500

Project Stakeholders

Name & Role	**Major Responsibility or Contribution**
Solomon Consultants; Company	The client, Solomon Consultants, is responsible for communicating their needs and requirements to the project team, so that the team can effectively develop a solution to a problem or challenge they are having in their company. They also are responsible for providing feedback, as well as any comments or concerns they may have throughout the project timeline.
Water In A Coffee Cup; Project Team	The Project Team, Water In A Coffee Cup, is responsible for completing deliverables on time and developing and implementing the SQL database.
Allie Mitelman and Ishi Gupta; Project Managers	The Project Managers are responsible for planning team meetings, creating the schedule and project deadlines, creating the powerpoint presentations, and generally keeping everyone on track and checking in to make sure all is going smoothly.
Aum Patel, Pranay Patel, Will Solomon; Database Administrators/Developers	The Database Administrators/Developers are responsible for creating the data model, creating and implementing mock data, and testing the database using queries and the mock data. They are also responsible for assisting in the final hand over and training for Solomon Consultants.
Solomon Consultants Clients; Clients	The clients are not directly affected by this project, but they will ultimately benefit from the improved security of their personal data, as well as improving client and company relationships.

Project Administration

Risk, Issue, and Change Management Plans and Logs

Assumptions:

When starting this project, we utilized prior assumptions to help develop our schedule, complete our deliverables, and finish the project. Solomon Consultants is a consulting firm related to one of our team members, Will Solomon, as this is his family's business. Keeping this information in mind, we assumed that we would have more **direct and efficient communication** with the client due to our familial connection to the business. However, if our assumption is incorrect, we will have to change the schedule of our project and increase the time needed to complete tasks due to the delayed response when communicating.

The next assumption made is the **time constraint** placed on finishing the project. Due to the semester duration of this course, we assumed that there would also be a limited time frame of less than a semester to complete the project. We were given the due date for our final presentation and project binder on the first day of class, so this information helped in making this assumption. However, if this assumption is incorrect, then there might be the chance that we finished the project too early and have more time for completion.

Going into the project, we learned more about our team's diverse skill set as individuals have different strengths and weaknesses. Therefore, we assumed that **utilizing** one's **strengths** when assigning roles **will help with the accuracy and execution of the project.** More specifically, those with more technical skills gravitated toward being a SQL developer while those with better interpersonal skills preferred being a project manager. However, if this assumption is incorrect, then individuals will be unable to successfully fulfill the requirements of their role due to their personal abilities being unaccounted for.

Also when looking at the dynamics of the team, we assumed that **every team member has different priorities that require a different schedule.** So, managing the dynamics of our team helped in ensuring productivity, communication, and cooperation. However, if this assumption is incorrect, it will limit potential contributions and solutions for the overall project.

Lastly, we assumed that our **final presentations will be better than our practice ones** as we will have feedback with notes for improvement as well as prior experience in presenting in front of the class. Looking at the feedback, we will make improvements to ensure that past mistakes are not repeated in the final presentation. However, if this assumption is incorrect, it is likely that we perform poorly on the final presentation and as a result, receive a bad grade.

Assumption 1: We will have direct and efficient communication with the client due to familial connection.
Impact if assumption is incorrect: If the assumption is incorrect, the timeframe for completing the project will expand due to the delay in communication from the client.

Assumption 2: We have a limited timeframe to complete the project for the client.
Impact if assumption is incorrect: Then we rushed the project, but will have more time to complete the project.

Assumption 3: Utilizing one's strengths when assigning roles will help with the accuracy and execution of the project.
Impact if assumption is incorrect: Team members will be unable to fulfill the requirements of their role due to their personal abilities being unaccounted for.

Assumption 4: Every team member has different priorities and schedules which requires a different level of productivity.
Impact if assumption is incorrect: It will limit potential contributions and solutions for the overall project.

Assumption 5: Our final presentations will be better than our practice ones due to feedback with notes of improvement as well as prior experience.
Impact if assumption is incorrect: We do poorly on the final presentation and receive a bad grade.

Risks:

At the beginning of our project, we identified certain risks that might negatively affect the work performance and overall completion of tasks. The first risk identified is the inability to meet with the contacts of Solomon Consultants via zoom or in-person. The likelihood of this risk occurring is **likely**, as there is a possibility that the company contacts are busy working or do not have time in their schedules. In order to decrease this likelihood, we will ensure that the time chosen works with both the sponsor as well as our team members. If this inability becomes a reality, the impact will be **moderate to high** as it will result in the delay of completing the project's tasks as well as expanding the required time-frame.

Another identified risk is the inability to meet the demands or fulfill the requests of the client. The likelihood of this risk occurring is **likely,** as there is a possibility that the client wants to change parts of the SQL database in order to better fit their company's goals. In order to decrease the likelihood of the risk, we will confirm the required parameters with the client to avoid unwanted and dramatic changes. Additionally, if this risk actually occurs, the impact will be **high**, as creating an effective SQL database that fits the client's needs is the purpose of our project. Additionally, this will mean that our project failed to meet the client's wishes.

The next identified risk is the inability to complete the assigned tasks within the time constraint. The likelihood of this risk happening is **possible**, if the schedule created is not properly followed and individual tasks are not completed on time. In order to decrease the likelihood of this risk, our solution is to schedule weekly meetings and set realistic due dates for task completion that work for every team member. If our solution does not prevent this risk, then the impact will be **high**, as we will be unable to present to the class, turn in the project binder, fulfill the client's needs, as well as receive a bad grade for this project.

Another risk that has been identified, is the inability to deliver the SQL database due to technical difficulties or unsaved changes. The likelihood of this risk is **possible** if the database developers forget to save the changes that they make. However, due to the amount of effort required to build the database and prior academic experience in SQL, our developers are more than aware of this risk. In order to reduce the likelihood of this risk occurring, our solution is to remind each other that all files and changes have been saved with every change. This solution will help with data loss prevention. If this risk occurs, then the impact will be **moderate-high**, as although the code can be written again, it will take a good amount of effort to rebuild it.

The last identified risk is the difficulty to support the amount of customers' information due to the reduced scalability of the database. The likelihood of this risk occurring is **unlikely,** as the company's projected growth has been calculated and accounted for in our database. In order to reduce the likelihood of this risk occurring, our team's solution is to get an approximate number

of current customers as well as the estimated projected growth. If this risk comes to reality, then the impact will be **moderate-high**, as an even larger database will be needed in a short amount of time.

Identified risks are measured by the likelihood and impact parameters defined below:

Risk Parameters:	
Likelihood Parameters:	**Impact Parameters:**
1. Very Likely	1. High
2. Likely	2. Moderate-High
3. Possible	3. Moderate
4. Unlikely	4. Low-Moderate
5. Very Unlikely	5. Low

Risk Log

Project Managers: Allie Mitelman and Ishi Gupta

Risk ID	WBS	Rank	Date Found	Assigned	Description	Strategy	Status	Close Out Date
001	1.2.6.1, 1.2.6.2, 3.2, 4.4, 6.2.2	4	02/21	Ishi and Allie	Inability to meet with company contacts via zoom or in-person	Confirming time that works with team and sponsor	01/23-04/26	04/26
002	1.2.6.1, 1.2.6.2, 3.2, 4.4, 6.2.2	1	02/21	Entire team	Inability to meet clients' demands or fulfill requests	Confirming/double checking requirements with clients	01/23-04/14	04/26
003	2.1.2, 3.3.2, 5.2	2	02/21	Entire team	Inability to complete tasks within time constraint	Scheduling meetings and realistic task completion dates that work for everyone	01/23-04/26	04/26
004	3, 3.1, 3.1.1, 4, 4.1, 4.2, 4.3, 4.3.1, 4.4	3	02/21	Will, Aum, Pranay	Inability to deliver SQL Database due to technical difficulties or unsaved changes	Remind each other/ ensure that all files are saved with every change	01/23-04/26	04/26
005	4, 4.2, 4.3, 4.3.1, 4.4, 6, 6.1,	5	02/21	Will, Aum, Pranay	Difficulty supporting the amount of customers information	Get approximate number of current customers as	01/23-04/26	04/26

6.2, 6.2.1, 6.2.2	due to reduced scalability in the database	well as the estimated projected growth

Description of Risk Log Fields:

1. Risk Id: A unique identifier
2. WBS: WBS number of the task(s) related to this risk
3. Rank: How important is this risk relative to others? Rank with 1=highest. No risks have the same rank.
4. Date found: Date risk became known. mm/dd/yy
5. Assigned to: Person who is assigned to manage this risk
6. Description: High level description of risk event, impact and probability
7. Strategy: What will be done to reduce the probability, impact, or both?
8. Status: On-going log of changes to risk, in order from most recent to oldest. Format: mm/dd/yy – action/update
9. Close out date: When did the risk probability go to zero? Describe in the final status. Remove any rank from this risk.

Issues Log

Along with the multitude of risks identified, we have also identified the main issue affecting Solomon Consultants. Prior to this project, Solomon Consultants stored all of their customers' data in an excel data sheet, however due to the growing amount of customers, a larger database is required. Our project aims to solve this problem, as we have created a bigger database in SQL in order to support the needs of the client. Moving the information into SQL will help increase the scalability, backup and recovery, ensure security, and improve the customer's overall experience with Solomon Consultants.

Project Managers: Allie Mitelman and Ishi Gupta

Issue ID	WBS	Date Found	Assigned	Description	Status	Close Out Date
17382	12.1	01/18/24	Group	The problem is that Solomon Consultants stores all of their clients' data in an excel sheet, and needs a more secure, organized, and larger storage capacity database.	A larger database has been created in SQL to solve the issue of scalability, security, and for the overall success of the business.	04/26/2024

Description of Issue Log Fields:

1. Issue Id: A unique identifier
2. WBS: WBS number of the task(s) related to this risk
3. Date found: Date issue became known. mm/dd/yy
4. Assigned: Person who is assigned to resolve this issue
5. Description: What is the problem or what action needs to be taken?
6. Status: On-going log of changes to issue, in order from most recent to oldest. Format: mm/dd/yy – action/update
7. Close out date: When did the issue get resolved?

Change Management Plan

With frequent team meetings both with and without the client, we were able to determine what needs to be changed. In order to better measure and record such changes, we utilized a change request log as well as a change log. Both logs are beneficial as they record date submissions, request/ submission owners, change descriptions, and overall impact of change on project.

Change Requests:

Change name	Change in SQL Database Information		
Date Submitted	03/05/2024	**Change Request Number**	C001
Requested by	Solomon Consultants (Client)		
Submitted by	Ishi Gupta		

Detailed Description of Change

Prior to the stakeholder review meeting on 03/05/2024, our team including both project managers and database developers, did not consider that real client data cannot be utilized. This change and review meeting occurred during the pre-database planning phase which lasted roughly 16 days-3 weeks.

Impact Analysis

Schedule	This change did not impact the overall time-constraint and scheduling of the project, however it did take some additional time to figure out how to get mock-data.
Cost	N/A (no additional cost created due to this change)
Related effects to other projects or parts of this project	After team deliberation, it was decided to utilize the Mockaroo platform to retrieve mock data to represent realistic customers. This change impacted how we get information and what type of information we utilize.

Change Log

Project Managers: Allie Mitelman and Ishi Gupta

Change ID	Date Submitted	Requested by:	Description	Cost/ Schedule Impact	Status
C001	03/05/2024	Solomon Consultants (Client)	Real client data cannot be used so mock data needs to be created	No financial cost/ additional hour to decide mock data logistics	Completed

Description of Change Log Fields:

1. Change Id: A unique identifier
2. Date Submitted: Date issue became known. mm/dd/yy
3. Requested by: Person who is requesting the change
4. Description: Describe the change being requested.
5. Impact: Describe the impact to cost or schedule.
6. Status: *Approved* or *Pending* or *Rejected* and date 2. Quality Issues and how you will manage quality

Communication Plan

Meeting Quality Requirements With Triple Constraints and Communication Plan:

In order to ensure that the quality requirements of our project as well as the needs of our client are met, we have utilized the triple constraints and created a communication plan. The triple constraints for our project involve the scope, time, and resources. For scope, we have to ensure database functionality, security and compliance, as well as suitable scalability and performance. Additionally, with the time-constraint involved, project deliverables need to be completed in a timely manner, project timeline needs to be followed, and schedules of team members needs to be considered. Lastly, the number and extent of our resources also play a factor in the success of our project. The resources involved in our project are our project managers, database developers, different types of hardware and software used, and a variety of platforms and websites utilized. By identifying our project's triple constraints, we are one step further in verifying the quality requirements are met. The following communication plan showcases the variety of quality needs and requirements requested by the stakeholders of Solomon Consultants.

Project Managers: Ishi Gupta and Allie Mitelman

This communication plan describes our strategy for keeping the project's stakeholders sufficiently informed to avoid any disappointment regarding cost, schedule, or quality goals.

Stakeholder	Information needs	Frequency	Medium	Response
Solomon Consultants (Brian Solomon)	Client information for the data model	Once	Phone Call	First Name, Last Name, Street, City, State, Zip, County, Phone number, Email, DOB, Status (Active, Inactive), Agent of record (who signed them up), Plan name, Product (Medicare advantage or supplement), Plan number (how many digits, mix of alphabets and number)
Solomon Consultants	Size of database	Once	Phone Call	It needs to have the capacity to store our

(Brian Solomon)				clients current data, and allow for a larger scalability as the company grows and we will need to store more client data.
Solomon Consultants	Availability to meet for reviews and updates to get feedback	Monthly	Zoom Call	It will be good to meet at least once a month to review the work you have done, and I will provide feedback or general updates to assist in creating a more efficient database.
WIACC	Availability to meet as a team to regroup and assess the work that needs to be done in order to stay on track with our Work Breakdown Structure	Weekly	In Person/Zoom Call	Our team will meet at least once a week, whether that be in person check ins, or zoom calls to update each other on work that has been completed or still needs to be completed. We will also meet to prepare for our presentations throughout the semester.

Project Schedule Summary

WORK BREAKDOWN STRUCTURE WITH GANTT CHART - WIACC 5740S

PROJECT TITLE	Water in a Coffee Cup (WIACC)
PROJECT MANAGERS	Allie Mikelman and Ishi Gupta
DATABASE DEVELOPERS	Vill Solomon, Aum Patel, Pranay Patel
COMPANY NAME	Solomon Consultants
DATE	2/6/2024

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	% of TASK COMPLETE
1	Initiate Project					
1.1	Identify Stakeholders	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2	Develop Project Charter	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.1	Define Scope	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.2	Define Requirements	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.3	Define Roles	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.4	Identify Controls	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.5	Identify Risks	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.6	Finalize Charter	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.6.1	Conduct Stakeholder Review	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
1.2.6.2	Obtain Stakholder Approval	VIACC	2/6/2024	2/20/2024	2 Weeks	100%
2	Plan Project					
2.1	Develop Project Plan	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.1.1	Develop Work Breakdown Structure	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.1.2	Develop Project Timeline	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.1.3	Assign Project Responsibilities	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.2	Develop Project Control Plan	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.2.1	Develop Communication Plan	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.3	Finalize Project Plan	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
2.3.1	Finalize Project Requirements	VIACC	2/20/2024	3/5/2024	2 Weeks	100%
3	Pre Database Planning					
3.1	Design Database Architecture	Database Developers	3/5/2024	3/19/2024	16 Days	100%
3.1.1	Design Data Model	Database Developers	3/5/2024	3/19/2024	16 Days	100%
3.2	Conduct Stakeholder Review	Database Developers	3/5/2024	3/19/2024	16 Days	100%
3.3	Practice Presentation	VIACC	3/5/2024	3/26/2024	3 weeks	100%
3.3.1	Make Powerpoint	PMs	3/24/2024	3/26/2024	3 Weeks	100%
3.3.2	Present	VIACC	3/26/2024	3/26/2024	3 Weeks	100%
4	Build and Test Database					
4.1	Create Database	Database Developers	4/2/2024	4/16/2024	2 Weeks	100%
4.2	Create Mock Data	Database Developers	4/2/2024	4/16/2024	2 Weeks	100%
4.3	Implementation of Database with Mock Data	Database Developers	4/2/2024	4/16/2024	2 Weeks	100%
4.3.1	Write and Test Queries	Database Developers	4/2/2024	4/16/2024	2 Weeks	100%
4.4	Conduct Stakeholder Review	VIACC	4/19/2024	4/19/2024	1 Day	100%
5	Final Presentation	VIACC	4/16/2024	4/23/2024	1 Week	100%
5.1	Edit and Add onto Powerpoint	PMs	4/16/2024	4/23/2024	1 Week	100%
5.2	Present Final Project	VIACC	4/23/2024	4/23/2024	1 Day	100%
6	Deploy Database					
6.1	Prepare Database for Client	Database Developers	4/29/2024	5/6/2024	1 Week	100%
6.2	Hand-Over	VIACC	4/29/2024	5/6/2024	1 Week	100%
6.2.1	Transfer Ownership	VIACC	4/29/2024	5/6/2024	1 Week	100%
6.2.2	Train Client	Database Developers	4/29/2024	5/6/2024	1 Week	90%

PHASE 1: INITIATE AND PLAN | PHASE 2: PLANNING | PHASE 3: BUILD DATABASE | PHASE 4: TEST DATABASE | PHASE 5: DEPLOY DATABASE

WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 | WEEK 7 | WEEK 8 | WEEK 9 | WEEK 10 | WEEK 11 | WEEK 12 | WEEK 10 | WEEK 11

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see WBS Gantt Chart attachment

Key Milestones:

- ☑ Start project: 2/6/2024
- ☑ Complete Phase 1: 2/20/2024
- ☑ Complete Phase 2: 3/5/2024
- ☑ Complete Phase 3: 3/26/2024
- ☑ Practice Presentation: 3/26/2024
- ☑ Complete Phase 4: 4/23/2024
- ☑ Present Final Project: 4/23/2024
- ☑ Complete Client Hand-Over: 5/6/2024
- ☑ Complete Phase 5: 5/6/2024

Resources Required

Resources Required:

In order to complete the project, several resources were required to be utilized. The type of these resources vary from software to person to machine. Without these resources, the project could not have been done as efficiently or effectively.

Required Resources For Project Completion						
ID	**Type of Resource**	**Resource Details/ Spec**	**Quantity**	**Location**	**Source**	**Assumptions**
R001	Software	SQL Database	1	Online/ Offsite	IaaS (Infrastructure-as-a-Service)	Assume 3 uses of platform by team
R002	Person	Project team members	5	Onsite	Students	Assume they are MIS students
R003	Machine	Computers	5	Onsite	Mac/ Windows	Assume they are personal devices
R004	Software	Microsoft Excel	1	Online/ Offsite	SaaS (Software-as-a-Service)	Assume that its used for deliverable completion
R005	Website	Canva	1	Online/ Offsite	SaaS (Software-as-a-Service)	Assume that it is used for presentation
R006	Platform	Zoom	1	Online/ Offsite	SaaS (Software-as-a-Service)	Assume it is used for group/ client meetings

R007	Machine	Phones	5	Online/ Offsite	Apple I-Phones	Assume it is used for group communication
R008	Person	Client-Solomon Consultants	3	Online/ Offsite	Client	Assume they assign project use requirements
R009	Person	Dr. Huber	1	Online/ Offsite	MIS Professor	Assume he assigns project assignment requirements
R010	Platform	Mockaroo	1	Online/ Offsite	SaaS (Software-as-a-Service)	Assume this is how mock data was created

Project Budget Summary

Cost Type	Amount
Labor Hours	$50 per member (30 hours/week for 11 weeks per member) = $82,500 total
External Costs	$14.99 Zoom Premium per Consultant $6,000 Database Hosting Fees $2,000 Software License
Labor (consultants, contract labor)	Consultant Fees $2,000
Equipment, Hardware or Software	Server Hardware $3,000 Mockaroo-free, Excel-free, Canva- free
List other costs such as travel & training	$2,500 Training 30 hours
TOTAL PROJECT BUDGET	$82,500 + $17,068.95 + $10,000 + $3,000 + $2,500 = **$115,068.95**

Due to the extensiveness of project, these calculations are a rough estimate

Individual Lessons Learned

Allie Mitelman:

I have learned many valuable lessons and skills throughout this semester-long project that I believe will immensely help me with future jobs and just life in general. Even though each semester in my classes there is usually some sort of group exercise or project. Each time I work with a group I learn something new about how other people work, as well as how I work. With this practice of working with other group members, I have only felt increasingly more comfortable and confident in my abilities to lead and follow. This semester, I have been able to notice other people's work styles and how each person's unique personality contributes to a stronger team. I have also noticed how some people naturally lead, while some naturally follow, or some adapt to both when a gap needs to be filled. I have found that I fall into the category of adapting as needed. I have learned to be flexible and patient. It is extremely important that a group member is able to actually listen to another member's thoughts or opinions. This helps not only with the project itself, but also with the team's togetherness and trustworthiness. I also learned it is important to have trust in others, allowing them to do what they agreed on doing and within the time guideline they set. These are many positive lessons I learned directly from working with my team members on our project throughout the semester.

The in class lego activity, along with Dr. Huber's advice taught me many lessons. I learned that there are times where it is necessary to put your foot down, drop a heavy book on the table, or turn off the lights. I struggled working with my team members during this activity as I could not convince anyone to read the instruction packet. I learned there were ways I could have stepped up and shared the importance of it. At the moment it was chaotic and stressful, but the lessons I learned from it are of value and our team laughs about it now, as we were by far the worst scoring team. But, if the goal was to use the most time, as many resources, and the most amount of money, we would have been first place ;).

Ishi Gupta:

With this project, I have learned so many valuable lessons that I will definitely implement and utilize in my future career. Not only have I enhanced my teamwork skills but have also improved my project management and technical ones. For this project, we kept in mind that some individuals are stronger in their technical skills than their interpersonal ones, while others are the opposite. Using our strengths and weaknesses to our advantage, our members felt comfortable working in their roles as they were better equipped to successfully complete their assigned tasks. Especially with the lego-building activity, our team definitely learned more about team dynamics and improvements that can be made in how we work together. When creating our lego tower, we did not read the instructions as thoroughly as we should have, which resulted in using too many resources. Thankfully, we learned from this mistake especially when creating our presentation and project binder, as we ensured that we fully read the instructions and feedback provided to us.

Additionally, I also learned that constant communication and time-management are critical in order to effectively work in a team as well as to successfully achieve our goals. I have collaborated in teams before with my other classes, however never for a semester-long project including a multitude of factors, situations, and challenges. As project managers, Allie and I, had to ensure that we were creating a realistic schedule for completing tasks, understanding the SQL database being created, and allocating for possible hurdles that might arise. By constantly communicating and coordinating with the team, we became more efficient in how we work together to complete tasks. Allie and I ensured that each member stayed on top of their assigned tasks and communicated if they were unable to do so. Frequent communication regarding the assigned tasks, helped in completing the project's final binder and enabled the project to move smoothly. Prior to this project, I truly did not know how many moving parts are involved in implementing and completing a project. From creating deliverables to presenting in front of the class, I have gained the personal and professional experience that will better prepare me for my future career in the tech world.

Pranay Patel:

In reflecting on this project, the key takeaway for me has been the challenge of managing conflicting schedules among team members. Balancing academic commitments and other responsibilities means that each member has limited time to dedicate to the project. Coordinating these limited windows of availability proved to be difficult. This experience highlighted the critical role of time management within the triple constraints, which was the toughest to navigate for our team. Throughout this project, I gained a deeper understanding of the impact between the three primary constraints of project management: time, cost, and scope.

Each of these elements influences the others, making it essential to manage them all together. I also learned that communication is key. We had to be clear and upfront about our schedules and how much time we could commit, which helped in planning our tasks more efficiently. As our project progressed, it became evident that scaling up would likely introduce significant resource constraints. We were already operating at the limits of our manpower and financial resources, and any scaling of the project would have required additional inputs that we were not equipped to provide at the time. This realization highlighted the importance of assessing resource availability and project scope, especially when planning larger-scale projects. It also taught us the value of flexibility and adaptability in project management, as we often had to adjust our plans based on the resources available to us.

Aum Patel:

Throughout this semester, my team, Water in a Coffee Cup (WIACC), completed a project that challenged our academic knowledge, teamwork, and problem-solving skills. We started the project with the clear goal of creating an SQL database for Solomon consultants that would increase their database's scalability, performance, and security. The project allowed us to apply the triple constraints learned in class to gain a deeper understanding of their importance.

We also learned the importance of effective communication and time management, which was an essential aspect of our project. Mastering them allowed us to understand the goals and vision of our clients and apply them to create what they desired. In addition, time management was crucial as we only had a couple of weeks to finish the project within the deadline and ensure that the handover was smooth; that way, if the client had any questions, they would be able to contact us.

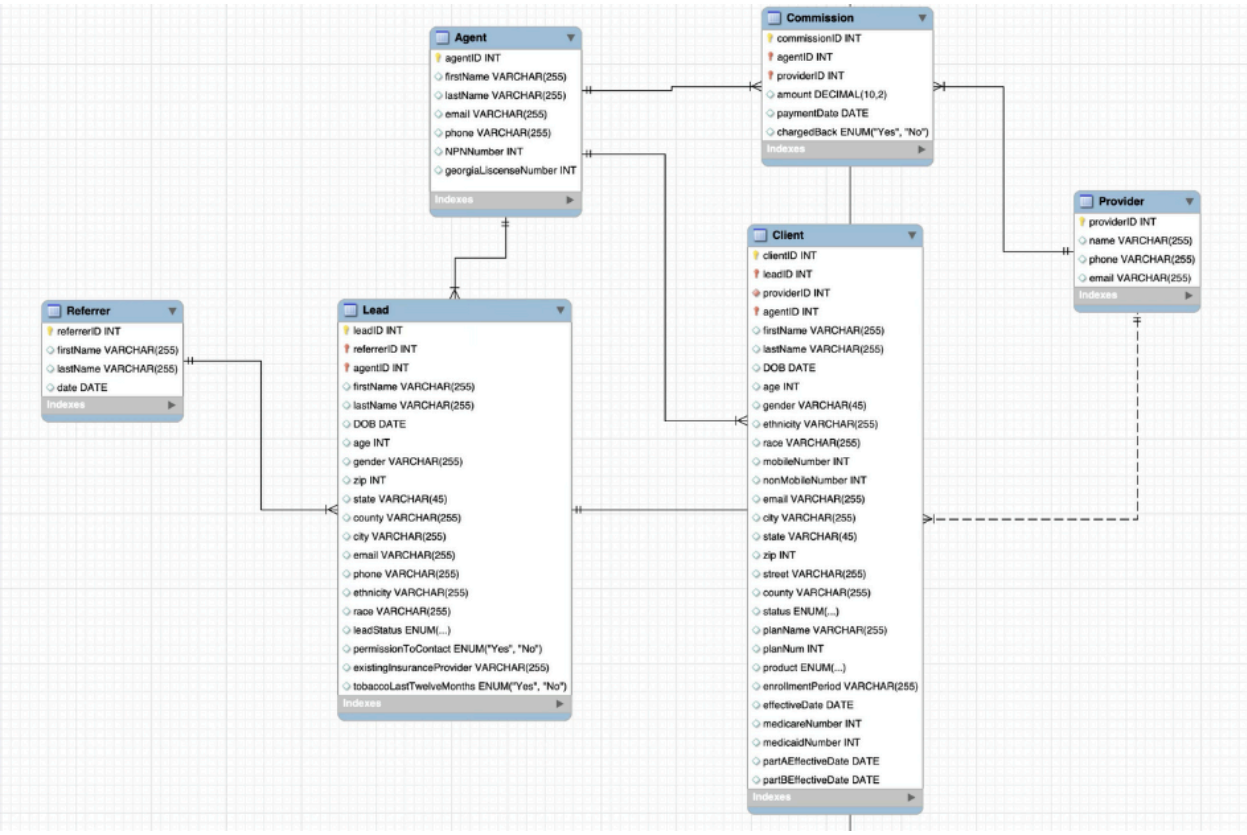
During the process of creating the SQL database for Solomon Consultants, our team had the opportunity to explore database design and management in depth. We discussed the concept of MoSCoW (Must-haves, Should-haves, Could-haves, and Won't-haves) to determine which aspects of the project were crucial to include for the client. Additionally, we experienced all the stages of Tuckman's team development. We started with forming, where we attempted to define our objectives and determine each team member's contributions to the project. We then started storming when roles, priorities, and leadership conflicts emerged. Lastly, we experienced performing when we completed our database and presented our final presentation. This course has been one of the most unique and enjoyable courses I have taken here, and it has been a pleasure to learn about project management at a deeper level.

Will Solomon:

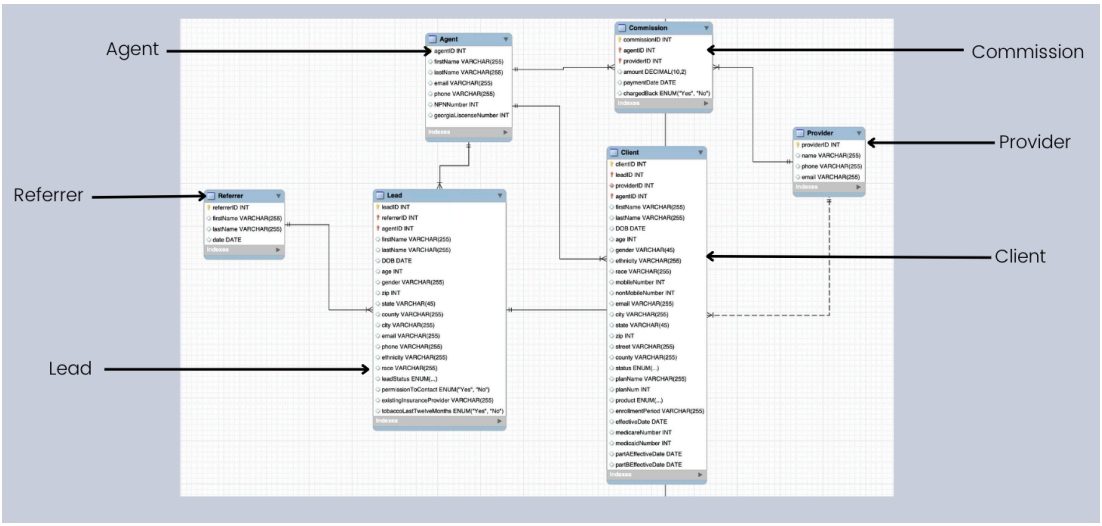
I had a few main takeaways through the duration of this project. I was able to take my knowledge of SQL to the next level. I had never designed a database from scratch. I learn very well from experience so I was glad to have the opportunity to expand my knowledge of SQL through actually making something. I am currently also in MIST 4610, and I felt very productive when working on this project because I was able to do work for both classes simultaneously. With the help of my team members I felt that this project was a taste of what the corporate world will be like if I go into the field of data. Additionally, I learned about teamwork and specifically the team lifecycle (Norming, Storming, etc.) Overall, I am very glad that I was able to get the opportunity to build something for my grandparents' company that really works. I have begun the handover stage of this project and I have been working with my family to successfully implement this new database. My grandfather, Michael, is very excited to begin to expand his company and is convinced that the database we have made is a great first step.

Appendices

Data Model



Data Model with Descriptors:



Training Document

Technical Requirements for MySQL:
Operating System: Compatible with Linux, Windows, macOS, etc.
Hardware: At least 2GB of RAM, 2 CPU cores, and 2GB of disk space
Networking: Reliable network connection for client-server communication

Step-by-step use cases:

A. How to add client's data to tables?

a. Use a MySQL client application to connect to the MySQL server. This typically involves providing a username, password, and host information
b. If multiple databases exist on the MySQL server, it's crucial to choose the one where you want to add the new data. Use the USE statement followed by the database name (most likely Solomon Consultants), which is the one we set up for you
c. Use the INSERT INTO statement to add new data to a table within the selected database. Specify the table name and column values for the new record
d. You can optionally query the table to verify that the new data has been successfully added. Use the SELECT statement to retrieve data from the table

B. How to update a client's information?

a. Connect to the MySQL database
b. Identify the table containing client information
c. Write a SQL UPDATE query to modify the client's information based on their ID or other unique identifier
d. Execute the query to apply the updates to the database
e. Verify the changes by querying the client's data again

C. How to delete a client from the database?

a. Connect to the MySQL database
b. Identify the table containing client information
c. Write a SQL DELETE query to remove the client's record based on their ID or other unique identifier
d. Execute the query to delete the client's record from the database
e. Verify the deletion by querying the client's data again

D. How to search for clients?

a. Connect to the MySQL database
b. Identify the table containing client information
c. Write a SQL SELECT query to search for clients based on specific criteria (e.g., name, email, location)
d. Replace the name with the appropriate column name and 'search_query' with the term you want to search for
e. Execute the query to retrieve the matching client records from the database

f. Review the search results to find the desired clients

Troubleshooting Guide:

1. Connection issues:
    a. Verify connection parameters
    b. Check network connectivity and firewall settings
    c. Test connection using the command-line interface
2. Permission errors:
    a. Ensure the user has the necessary privileges
    b. If not, grant privileges using the GRANT statement
3. Degrading performance issues:
    a. Analyze query execution with EXPLAIN
    b. Optimize queries by utilizing indexes and minimizing unnecessary operations
    c. Monitor server resources for overload
4. Server crashes or failures:
    a. Review MySQL error logs
    b. Inspect system logs for hardware or OS issues
    c. Restore from backup in case of data loss