# Final Phase Project Portfolio

Team 11:

Pranav Bhusari

Scott Luntz

Myles Lesser

Matt Quigley

Justin Walshager

# Table of Attendance

## Phase 1

| Names | Meetings Attended |
|---|---|
| Pranav Bhusari | Initial meeting, Office Hours Revision, Final Meeting |
| Justin Walshager | Initial meeting, final meeting |
| Myles Lesser | Initial meeting, final meeting |
| Matt Quigley | Initial meeting, final meeting |
| Scotty Luntz | Initial meeting, final meeting |

### Initial Meeting

Date: Tuesday 12th, 2019
Time: 1:20 PM
Duration: 15 minutes
Method of collaboration: In person
Agenda for meeting: Delegate tasks

### Office Hours Revision

Date: Wednesday 12th, 2019
Time: 11:00 am
Duration: 30 minutes
Method of collaboration: In person
Agenda for meeting: Revise diagram with professor

### Final Meeting

Date: Thursday 21st, 2019
Time: 12:00 pm
Duration: 5 minutes
Method of collaboration: In person
Agenda for meeting: Present deliverable to group

# Phase 2

| Names | Meetings Attended |
|---|---|
| Pranav Bhusari | Initial meeting, Final Meeting |
| Justin Walshager | Initial meeting, final meeting |
| Myles Lesser | Initial meeting, final meeting |
| Matt Quigley | Initial meeting, final meeting |
| Scotty Luntz | Initial meeting, final meeting, |

## Initial Meeting

Date: Tuesday, Apr 2nd, 2019 Time: 1:20 PM
Duration: 15 minutes
Method of collaboration: In person
Agenda for meeting: Delegate tasks

## Final Meeting

Date:Thursday, April 11th, 2019
Time: 12:00 pm
Duration: 5 minutes
Method of collaboration: In person
Agenda for meeting: Present deliverable to group

# Phase 3

| Names | Meetings Attended |
|---|---|
| Pranav Bhusari | Initial meeting, Final Meeting |
| Justin Walshager | Initial meeting, final meeting |
| Myles Lesser | Initial meeting, final meeting |
| Matt Quigley | Initial meeting, final meeting |
| Scotty Luntz | Initial meeting, final meeting, |

## Initial Meeting

Date: Tuesday, Apr 15th, 2019 Time: 3:30 PM
Duration: 15 minutes
Method of collaboration: In person
Agenda for meeting: Delegate tasks

## Final Meeting

Date:Thursday, April 17th, 2019
Time: 3:30pm
Duration: 5 minutes
Method of collaboration: In person
Agenda for meeting: Present deliverable to group

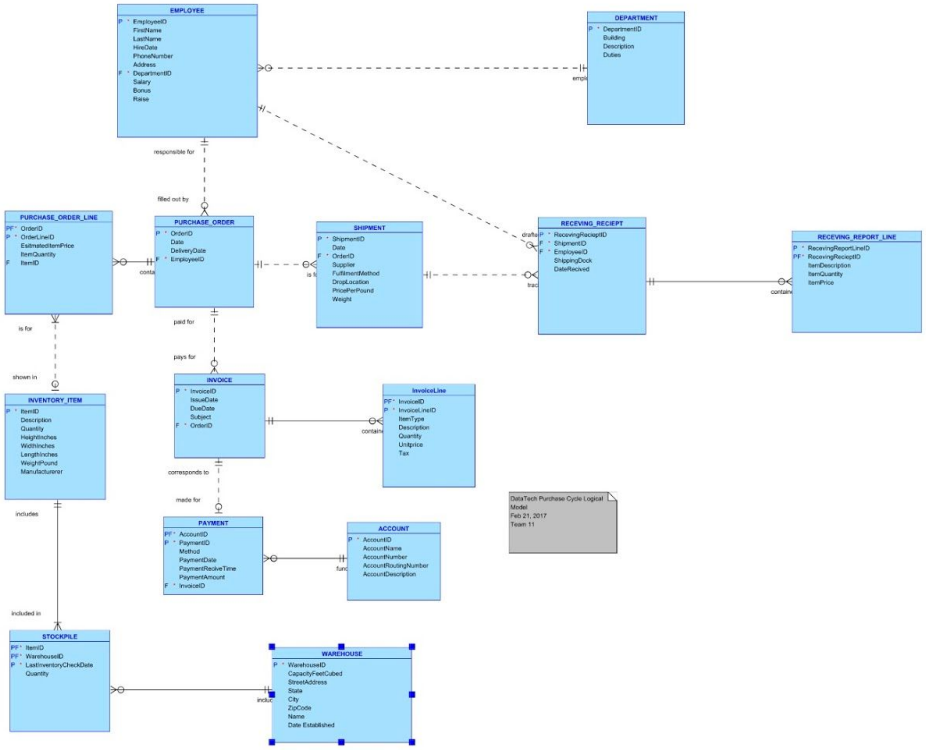
# Contribution Chart

| Tasks | Myles Lesser | Scott Luntz | Pranav Bhusari | Matt Quigley | Justin Walschlager |
|---|---|---|---|---|---|
| Logical Database Design | | X | X | | |
| Meeting organization | | X | X | X | |
| Relational Database Design | | | X | | X |
| Documentation | | X | X | | |
| SQL tables | X | | X | X | |
| Initial DDL Generation (automated) | | | X | | X |
| Database population | | | X | | |
| DDL Nullable Parent Child Debug | X | X | X | X | |
| Database Testing | | X | X | | X |
| Version control | X | | X | X | |

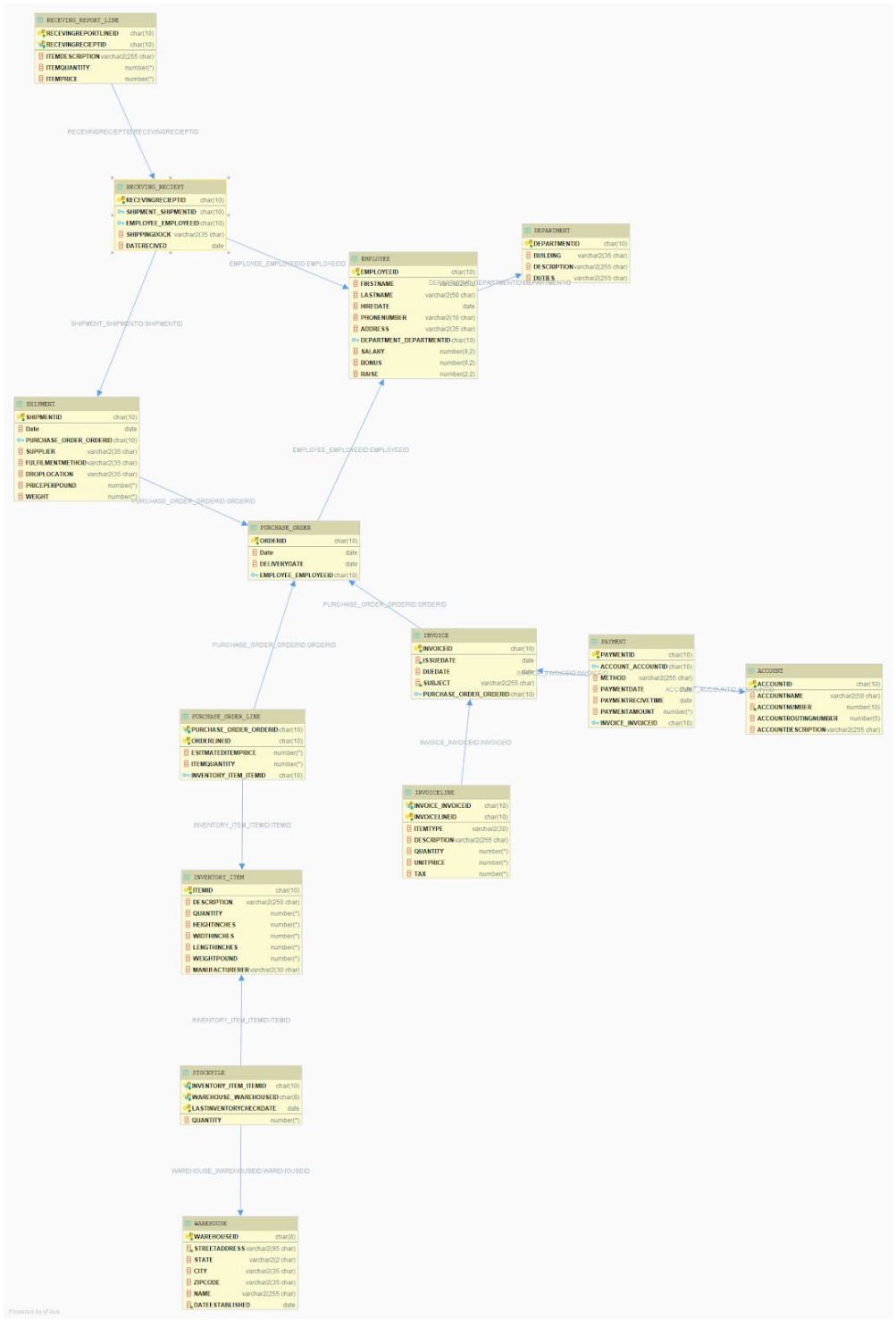
| | | | | | |
|---|---|---|---|---|---|
| **Refactoring** | | | **X** | | |
| **P3: Document Setup** | | **X** | **X** | | |
| **P3: VCS** | **X** | | **X** | | |
| **P3: Document Formatting** | | | **X** | | **X** |
| **P3: Zachman Framework** | | | | **X** | |
| **P3: SQL Querying and documentation** | | **X** | **X** | | |
| **P3: Team Reflection** | **X** | **X** | **X** | **X** | **X** |

# Entity Relationship Diagram

## Logical



# Physical


RECEVING_REPORT_LINE
RECEVINGREPORTLINEID char(10)
RECEVINGRECIEPTID char(10)
ITEMDESCRIPTION varchar2(255 char)
ITEMQUANTITY number(*)
ITEMPRICE number(*)
RECEVINGRECIEPTID:RECEVINGRECIEPTID
RECEVING_RECIEPT
RECEVINGRECIEPTID char(10)
SHIPMENT_SHIPMENTID char(10)
EMPLOYEE_EMPLOYEEID char(10)
SHIPPINGDOCK varchar2(35 char)
DATERECEIVED date
EMPLOYEE_EMPLOYEEID:EMPLOYEEID
SHIPMENT_SHIPMENTID:SHIPMENTID
EMPLOYEE
EMPLOYEEID char(10)
FIRSTNAME varchar2(50 char)
LASTNAME varchar2(50 char)
HIREDATE date
PHONENUMBER varchar2(10 char)
ADDRESS varchar2(35 char)
DEPARTMENT_DEPARTMENTID char(10)
SALARY number(9,2)
BONUS number(9,2)
RAISE number(2,2)
DEPARTMENT_DEPARTMENTID:DEPARTMENTID
DEPARTMENT
DEPARTMENTID char(10)
BUILDING varchar2(35 char)
DESCRIPTION varchar2(255 char)
DUTIES varchar2(255 char)
SHIPMENT
SHIPMENTID char(10)
Date date
PURCHASE_ORDER_ORDERID char(10)
SUPPLIER varchar2(35 char)
FULFILMENTMETHOD varchar2(35 char)
DROPLOCATION varchar2(35 char)
PRICEPERPOUND number(*)
WEIGHT number(*)
PURCHASE_ORDER_ORDERID:ORDERID
EMPLOYEE_EMPLOYEEID:EMPLOYEEID
PURCHASE_ORDER
ORDERID char(10)
Date date
DELIVERYDATE date
EMPLOYEE_EMPLOYEEID char(10)
PURCHASE_ORDER_ORDERID:ORDERID
PURCHASE_ORDER_ORDERID:ORDERID
INVOICE
INVOICEID char(10)
ISSUEDATE date
DUEDATE date
SUBJECT varchar2(255 char)
PURCHASE_ORDER_ORDERID char(10)
PAYMENT
PAYMENTID char(10)
ACCOUNT_ACCOUNTID char(10)
METHOD varchar2(255 char)
PAYMENTDATE date
PAYMENTRECIVETIME date
PAYMENTAMOUNT number(*)
INVOICE_INVOICEID char(10)
ACCOUNT
ACCOUNTID char(10)
ACCOUNTNAME varchar2(50 char)
ACCOUNTNUMBER number(10)
ACCOUNTROUTINGNUMBER number(5)
ACCOUNTDESCRIPTION varchar2(255 char)
PURCHASE_ORDER_LINE
PURCHASE_ORDER_ORDERID char(10)
ORDERLINEID char(10)
ESTIMATEDITEMPRICE number(*)
ITEMQUANTITY number(*)
INVENTORY_ITEM_ITEMID char(10)
INVOICE_INVOICEID:INVOICEID
INVOICELINE
INVOICE_INVOICEID char(10)
INVOICELINEID char(10)
ITEMTYPE varchar2(30)
DESCRIPTION varchar2(255 char)
QUANTITY number(*)
UNITPRICE number(*)
TAX number(*)
INVENTORY_ITEM_ITEMID:ITEMID
INVENTORY_ITEM
ITEMID char(10)
DESCRIPTION varchar2(250 char)
QUANTITY number(*)
HEIGHTINCHES number(*)
WIDTHINCHES number(*)
LENGTHINCHES number(*)
WEIGHTPOUND number(*)
MANUFACTURERER varchar2(30 char)
INVENTORY_ITEM_ITEMID:ITEMID
STOCKPILE
INVENTORY_ITEM_ITEMID char(10)
WAREHOUSE_WAREHOUSEID char(8)
LASTINVENTORYCHECKDATE date
QUANTITY number(*)
WAREHOUSE_WAREHOUSEID:WAREHOUSEID
WAREHOUSE
WAREHOUSEID char(8)
STREETADDRESS varchar2(95 char)
STATE varchar2(2 char)
CITY varchar2(35 char)
ZIPCODE varchar2(35 char)
NAME varchar2(255 char)
DATEESTABLISHED date

# Enterprise Integration Plan

Blacked out area is reserved for models

| | DATA (What) | FUNCTION (How) | NETWORK (Where) | PEOPLE (Who) | TIME (When) | MOTIVATION (Why) |
|---|---|---|---|---|---|---|
| **OBJECTIVE/SCOPE** | • Database Servers<br>• Installation Hardware<br>• Software Licenses<br>• Server Software License<br>• Organization Lists | • Manual Installations<br>• Software Development<br>• Network Design<br>• Budgeting<br>• SDLC | • Dublin Ireland | • Account Administrators<br>• Financial Administrators<br>• Receiving Clerks<br>• Purchasing Agents<br>• Software developers | • Analysis<br>• Design<br>• Implementation<br>• Prototyping<br>• Deployment<br>• Maintenance | • Provide organized alternative to flat-file system.<br>• Deal with clients and purchases more efficiently<br>• Increase company scalability |
| **BUISNESS MODEL** | | | | | | |
| **SYSTEM MODEL** | | | | | | |
| **TECHNOLOGY MODEL** | | | | | | |
| **DETAILED REPRESENTATIONS** | | | | | | |
| **FUNCTIONING ENTERPRISE** | • List of purchases<br>• List of agents<br>• 2 Microsoft Exchange servers.<br>• Windows Server 2019 Operating system company package<br>• Team Desk Software license company package.<br>• Employee information<br>• Form Schema and templates<br>• Department and Shippers list<br>• Receipt tracking and categorization list.<br>• Sale items and corresponding storage and inventory identification.<br>• Accounts payable for customers and employees. | • Manual Installations of new software was were carried out by DataTech maintenance staff.<br>• Software development was handled by DataTech programmers and developers.<br>• Physical network set-up involving servers and printers, as well as connectivity was handled by Network engineers.<br>• A Project Manager oversaw the SDLC process ensuring that each step was on track and completed in a timely manner.<br>• Budgeting was handled during the planning phase and then adjusted to account for sudden changes. | • DataTech headquarters was based in Dublin Ireland. Development, testing, and implementation all took place in this location. | • Primary DataTech Agents staff including new hires, added on to the company during transitional period.<br>• Operational maintenance staff assigned to installations and physical system upkeep<br>• Operational staff responsible for normalization and modeling of the finished system.<br>• Customers as well as associated businesses put in place. | • Design and testing meetings took place between the following dates<br>• Phase 1: March 12th – March 21st<br>• Phase 2: April 2nd – April 11th<br>• Phase 3: April 15th – April 17th<br>• Implementation was completed on April 26th | • SDLC was used for development of the software; following a process spread out into Analysis, Design, Implementation, Prototyping, Deployment.<br>• Software was completed achieving all goals set at the beginning.<br>• Goals included changing the file system from the old flat file to the new software, organizing and creating efficient strategies for dealing with client purchases, and tracking associated agents.<br>• New hardware, network, and software increased DataTech scalability, allowing them to take on more customer base then previously established. |

# Team Reflections

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## Pranav Bhusari

This project represented a significant learning experience in collaboration and leadership. Throughout these three phases, I organized meetings, delegated work and facilitated a learning environment where every team member would feel valued and respected.
As well as being my first step into leadership, these milestones taught me a lot about cumulative success. More specifically, how my work on Phase 1 made Phase 2 easier and so on. Since I did the technical aspects of the project alone, I was able to have a comprehensive view of the data model. From data types to referential integrity, I knew every column of our database. This is partially due to our excellent communication and collaboration through GroupMe and version control software (git).
As we strive further into the digital age, a vast majority of our knowledge ends up SQL databases for better or for worse. By applying the concepts that I have seen in lecture, I was able to venture far beyond powerpoint slides and arduous lab pdfs.

## Scott Luntz

This project had an abundance of significance due to its real-world application of using data to find company information. The difference between this project and many of those in the past is that in this project our group focused on a legitimate company and on the use of maintaining and sorting that data from the company. In past courses many of the projects we have focused on revolve around hypothetical situations instead of actual business cases. Storing information in a database is becoming the main way to collect data, in result using SQL to manage that data has become ever more important. This project also had significance in other aspects as our group learned valuable communication skills needed in real-world situations. Our group communicated effectively through GroupMe and was able to arrange meetings and delegate tasks through its service. In the real world of IT working as a team is extremely important and is a valuable skill that needs to be mastered. The skills that I've learned from this project will transfer to my abilities outside of the classroom.

## Myles Lesser

This project is very significant not only because of the work that we each did, but because of the teamwork and communication needed to complete this project quickly and efficiently. Throughout the span of this project our group had to communicate effectively and be able to work together utilizing each teammates strengths and weaknesses. This will be very useful to me in my internship over the summer where as a group we will have to work together to complete tasks. Being able to identify strengths and weaknesses will be a big part of splitting up work effectively.  Another aspect of this project that is beneficial is the actual hands on experience we received working and creating databases. This project allowed us to use what we learned in class and apply it directly to a database, giving us hands on experience that we could use in future endeavors. Due to the fact that SQL language is universal, our knowledge of SQL databases we will now be able to pull data from most, if not all, databases. Lastly this project will look good to future employers showing that we have previously worked with SQL databases and know DML, DDL, and DCL.

## Justin Walshager

The project had big amount of significance, because of its an actual company and it felt more like a real-world experience rather than just another project for a class. With our use of GroupMe we were able to communicate, which made working on the project easier than it would be without GroupMe. We were able to delegate tasks to people and arrange meetings through GroupMe and during class.With the more use of SQL databases and information being stored within them, the project gave us an idea what they look like, and have they function and how to work with them. We were able to get plentiful experience with SQL databases during this time working on the project. With this project we were able to use information that we learned during class to help us with the project. Beyond this project, at an actual job you will have to work as a team and communicate and have good interpersonal skills, which this project helped us get better in those fields.

## Matt Quigley

The project held an incredible amount of significance to me. The project tasks and objectives, help to simulate a real-world business case; allowing for insights into the many aspects that go into projects of this nature. I increased my technological knowledge of complex operating systems, as well as modeling systems and the relationships between their various entities. I learned the importance of proper database management. I initially thought it was a simple process designing and integrating databases; laying out how they interacted with each other, and other entities. Throughout this project, I've been able to grasp the importance, as well as the many logistics associated with this type of work. as well as giving insight into the technological side of business-inspired projects, it also helped illustrate the interpersonal skills needed to operate in a workgroup environment. In the past projects have been short-lived, only taking place over the course of a month at most. However, this project involved a group of people collaborating over the course of a 4-month long semester. I've learned that project teams require much more than technological knowledge. They require proper communication, a work delegation system, structured scheduling, and the ability to adapt to the needs of a group. I personally believe I work well in group settings, however, I always end up taking a leadership role. On this occasion, I avoided such a role, instead, learning what it means to be a good team member. Overall the project has made me much more confident in my ability to work on projects involving multiple drawn-out phases.

# Github Link

For a more readable version of the .md files and a view of how this project grew over time, check out the official project git here: https://github.com/pbhusari/Phase3

Note that collaborative effort was taken on this document only, so contributors are reflected in commit history.