Milestone52

Project Title: POS System	Project Group #: 11
Instructor: Benjamin Yu Students	Set ACIT 1A
Yu PoYing	A00932303
Hampson Andrew	A00954302
Chen Kuei Yuan	A00962767
Liu Feng	A00932532

1. We have achieved designing the PO system by writing the proposal, identifying the stakeholders, considering the requirements of the PO system, constructing basic ER diagram, improving our ER diagram and normalizing it, defining data dictionary, creating sample database and sample data. There many difficulties we have encountered in each stages of designing our PO system. We applied the knowledge learn from the course to solve the essential problem encountered in designing and improving our PO system. Also, we setup regular meetings every weeks to keep information well shared between members so everyone has the same level of understanding about our project. Cloud documents storage tools and project progress managing tools helps a lot to coordinate our project progress between members. We would add more constrains for our PO system, also we will add more attributes or create new entities to our PO system especially regarding the materials required in film industry.
2.

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MileStone 1

Purchase Ordering System

- summary descriptions of information required from the database

In companies that purchase a large and varied amount of primary materials, a dedicated and robust purchase ordering system is required to track purchases, help inform future purchases, and track suppliers, orders and outstanding invoices.

Most primary material purchases in industry are not completed by the time the goods are delivered. In fact, it can be weeks until payment reaches the supplier. In most cases, the supplier issues an invoice which must work its way through various departments before a cheque can be mailed. It's easy for purchases to be made, then forgotten about until hefty fines accrue. Pencil and paper systems are inefficient and make errors easy, so the move to computer services is an obvious choice.

In the film industry, the variety of purchases is staggering. One production company can consult with thousands of suppliers, from anywhere from construction materials to clothing to electrical equipment. Most of these companies have multiple employees across several departments dedicated only to buying material. The requests for stock from all other employees come to these purchasers, who then communicate with relevant suppliers. They also handle the invoices and purchase orders created by the transaction.

The stakeholders:

These stakeholders are more concerned with the analysis of data and the information it contains

Management: Management needs a global view of outstanding accounts, inventory and, for accountability, a record of which employees requested which materials.

Accounting: Accounting needs a record of every invoice and a sum of what is owed to which suppliers.

Conversely, these stakeholders are interested in the creation, accumulation and organization of data entities.

Purchasers: The purchaser needs to be able to create POs, to list suppliers by what they sell, find information about suppliers, such as address, prices, etc.

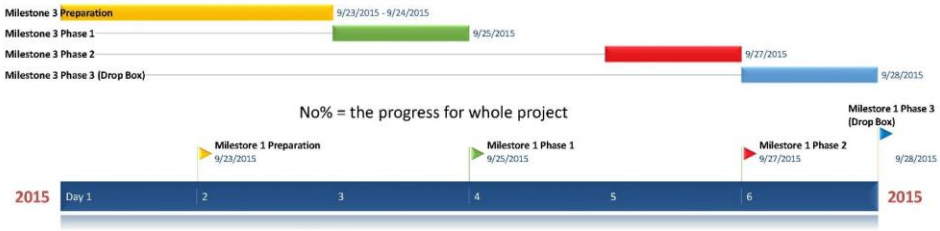
Employees: Employees need to be able to request that certain items or styles of items be bought.

Suppliers: Suppliers must be able to change what products are listed in the database, what invoices are created.

There would be many EMPLOYEES requesting many PURCHASE ORDERS. One PURCHASER would create each PURCHASE ORDER. A SUPPLIER would provide many INVOICES, each INVOICE specifying many INVENTORY items. One PURCHASE ORDER contains one or many INVOICES.

(We are making the assumption that the suppliers, Production Company, and other parties all have access to and are willing to use the same database. In reality this would be infeasible and near-impossible to implement.)

Gantt Chart



Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1. Meeting Specifics

Type:	**Milestone1- phase 1**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-09-25	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach	**Location:**	Free table in Second floor SW 1		
Minute Taker:	York				

2. Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Project Leader	10%
Zach Yu	Yes	Coordinator	10%
Peter	Yes	Project Leader	10%
York	Yes	Time Scheduler	10%

3. Agenda

Id	Topic	Presenter	Times
1	Two Proposal	All team member	2015-09-25

4. Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Read milestone 1	All team member	Done

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1. Meeting Specifics

Type:	**Milestone1- phase 2**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-09-27	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach		**Location:**	Free table in Second floor SW 1	
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Project leader	60%
Zach Yu	Yes	Coordinator	60%
Peter	Yes	Project leader	60%
York	Yes	Time Scheduler	60%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Library system	Peter	2015-09-27
2	POS system	Andrew	2015-09-27

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Process
1	Milestone 1 update Two Proposal discussion	All team member	60% finished
2	First version of POS system and first version of Library system	All team member	In process

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone1- phase 3**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-09-28	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach	**Location:**	Meeting Room-2515-SW01		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Project Leader	100%
Zach Yu	Yes	Coordinator	100%
Peter	Yes	Project Leader	100%
York	Yes	Time Scheduler	100%

3.Agenda

Id	Topic	Presenter	Time/Status
1	project update	All team member	2015-09-28

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Milestone 1 update Two Proposal discussion	All team member	Done
2	First version of POS system and first version of Library system	All team member	Done

MileStone 2

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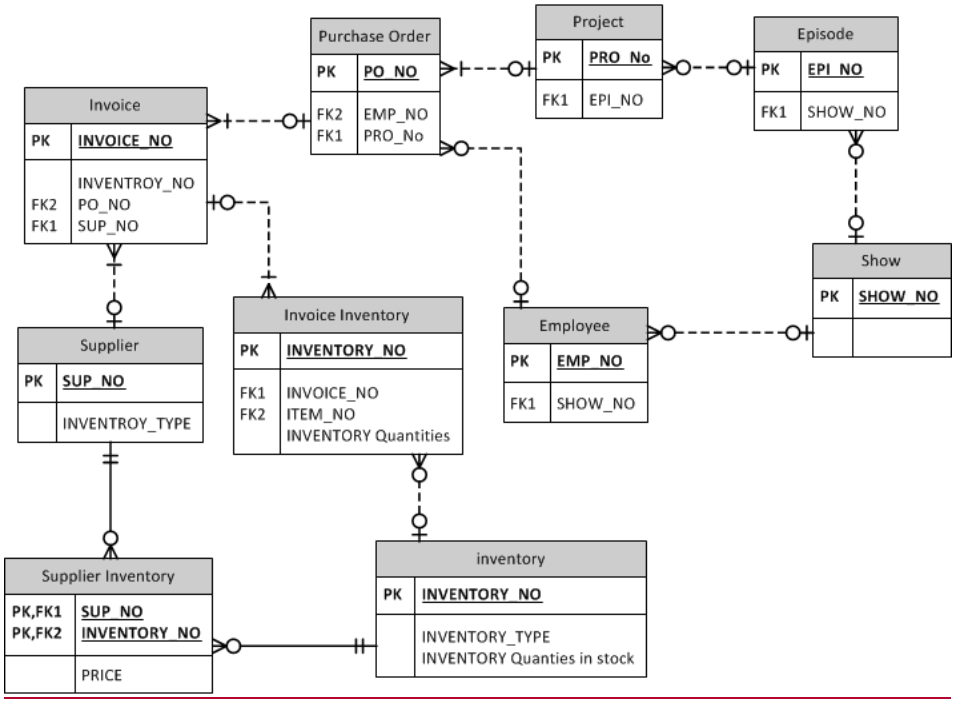
A.Detailed Descriptions of Stakeholders



In our purpose, there are four major stakeholders.

1. Management: People who want to see details, control the flow of money, and make decisions, such as CEOs, directors, and coordinators. It also includes accountants, who are responsible for dealing with financial problems, and production designers, who are responsible for the progress of every project. In addition, Managers also need to know who is in charge of the projects. The Managers only need to periodically check the database data, to analyse the preparedness and view the orders and money that is currently owed.

2.Employees deal with materials. They are in charge of real needs for film. They work for different projects and require different materials. Employees decide what materials are needed based on the project. They must acquire materials under project's and episode's budget.

3. Purchasers, a sub-type of employees, scout out potential suppliers and order materials in for projects. They search for suppliers who provide what is required and compare

around to find the best deals between suppliers. They would also use this database to review their past purchase records, budgets they have spent, and shipping states.

4. Suppliers service the material from outside of movie industry. They want to get paid by selling their goods. They would update their inventory to suit the needs of their customers; quickly acquire information of orders, and prepare invoice for purchasers.

- ~~who are the stakeholders~~
- write out 12 user stories on what the stakeholders would want to do with the database

1. As an accountant, I want to be able to see all outstanding(unpaid) invoices.
2. As a manager, I want to know where our budgets goes.
3. As a purchaser, I want to create and manage purchase orders (database access).
4. As a purchaser, I want to know the suppliers' types
5. As a purchaser, I want to see my previous orders.
6. As a purchaser, I want to have many purchases containing in one order.
7. As an employee, I want to know the shipping states of my order.
8. As a supplier, I want to know when is the order made.
9. As a supplier, I need to upload the newest product information.
10. As a supplier, I want to know how many items i need to delivery per day.
11. As a manager, I want to see what department an employee belongs to.
12. As an employee, I want to know if supplier has enough quantity of certain item that I want to purchase.

~~Zach:~~

users)

Data is provided from physical artifacts, i.e. Purchase Orders, Invoices, Start Slips, Budget Alerts, Scene Breakdowns, Tech Surveys etc. The database serves as a compact file record and quick access for these hundreds of relevant documents. They are

This database requires its users to provide their own data. People who belong to movie industry need to provide their personal data, project data, and their needs of materials. Suppliers have to provide their product data and store data. You combine data from both sides to form this PO database system. Users could be benefit from this database system. They are able to see information like price comparison between suppliers, how much budget is left, where the money goes, how many items are in stock, and who is in charge of a certain program. Different functions could be useful to different users.

In group 11, we have a regulative meeting every Wednesday at 14:30-15:30. If we don't get on schedule, we will add more meeting time on Thursday and Friday afternoon in the due day week.

For the basic responsibilities affiliation, Andrew is the project leader. He designed the major part of database structure and is the final editor. Additionally, Peter (Kuei Yuan) will be the second hand for the project designing. After the discussion in the meeting, Andrew and Peter would develop major new process for the milestone. Zach (PoYing) contacts all the group members and inspects the process of the group members. He also need to re-edit old milestones from feedback and new progress. York (Feng) will build the Gantt chart and takes down the meeting records.

In our group, we use facebook messages to contact each other. Importantly, we use the google drive to save and share data between group members. Therefore, we can see everyone's progress immediately. However, face to face meetings are very important to us. We establish more great ideas while we are discussing the topic. Also, we coordinate the team to prevent delays.

Gantt Chart

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	Zach
Prepared By:	Zach

5. Meeting Specifics

Type:	**Milestone2- phase 1**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-06	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach	**Location:**	Free table in Second floor SW 1		
Minute Taker:	York				

6. Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	20%
Zach Yu	Yes	Coordinator	20%
Peter	Yes	Team Member	20%
York	Yes	Time Scheduler	20%

7. Agenda

Id	Topic	Presenter	Times
1	Assign the task for each team member	Zach and Andrew	2015-10-06
2	Append any updates to the detailed proposal	Zach	2015-10-06

8. Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Review milestone 1 and 2	All team member	Done
2	Make decision for each role of group member in milestone2 A, Zach will charge of part 3 B, Andrew will charge of part 1 C, Peter will charge of part 3 D, Each group member will provide 3 user stories	All team member	In process

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1. Meeting Specifics

Type:	**Milestone2- phase 2**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-7	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach		**Location:**	Free table in Second floor SW 1	
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	30%
Zach Yu	Yes	Coordinator	30%
Peter	Yes	Team Member	30%
York	Yes	Time Scheduler	30%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Review the feedback about milestone 1 from instructor Benjamin	Zach	2015-10-07

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Process
1	Milestone 2 update A, add 12 user stories	All team member	Finished
2	Part A, B, C discussion	All team member	In process

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone2- phase 3**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-08	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach		**Location:**	Meeting Room-2515-SW01	
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	80%
Zach Yu	Yes	Coordinator	80%
Peter	Yes	Team Member	70%
York	Yes	Time Scheduler	70%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Final Discussion	All team member	2015-10-08
2	project update	All team member	2015-10-08

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	A, Create online document for DB group ; B, Share new edited with milestone2; C, Zach will work with Peter to finish ERD D, Zach will update the entity somewhat;	Zach	A, Done B, Done C, in process D, in process

No.	Subject/Description	Owner	Status & Progress
2	A, Update progress for each task ; B, Gantt chart building is still on the way; C, Report every cases happened in meeting;	York	A, Done B, in process
3	Show and explain the relationship about each entity for the part of draw ERD, It includes PO Request, invoice, purchaser, supplier, inventory;	Peter	in process
4	A, Share understanding about whether or not the entity is necessary to add in the ERD; B, Andrew will build relationship on the basis of Zach's entity	Andrew	A, Done B, in process

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone2- phase 4**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-09	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach	**Location:**	Meeting Room-2515-SW1		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	100%
Zach Yu	Yes	Coordinator	100%
Peter	Yes	Team Member	100%
York	Yes	Time Scheduler	100%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Final meeting before upload	All team member	2015-10-09
2	project review and update	All Team member	2015-10-09

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Check the process	All team member	Done
2	Describe the stakeholder	All team member	Done
3	Project Planning	Zach	Done

- ~~frequency of meeting:~~

~~We have regulative meeting at 15:30~16:30 on Wednesday.~~

~~Temporary meeting at 17:30~18:30 on Tuesday, Wednesday, Thursday.~~

- ~~responsibilities:~~

~~Project Leader: Andrew~~

~~Most of project process and design.~~

~~Coordinator: Zach~~

~~Set up the meeting place and schedule, contact the team members.~~

~~Notetaker: Peter~~

~~Record the key points of the meeting.~~

~~Moniter: York~~

~~Time keeper, Gantt chart, check the progress~~

- ~~means of communication:~~

~~Email, Social Media, face to face, online tools.~~

- ~~how to share data:~~

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~~Using google doc to online type and edit.~~

Milestones 3

ER diagram including documentation on the design and justification of design choices.

- For each entity, describe how it relates to the data sources identified in Milestone 2 and provide sample data.
- For each relationship in the ER diagram, describe how it relates to the information provided in Milestone 1 and 2, and provide examples.
- **ER diagram**

All the entities in our table are direct representations of objects in real life. This was not the first version of our diagram, and I am certain that at least 1 more will follow (for normalization, adding attributes, subtypes of employee or formatting errors) , but each and every entity is there to fulfill a purpose. A basic system might include just the Invoice, with price and items and supplier and shipping info, and the Purchase Order, with employee and date and location and billing info. It would be a horrible, messy disordered table, with numerous potential anomalies. Most of the other entities exist to resolve these anomalies, with Invoice Item and Supplier Inventory being perfect examples. The rest better model the reality of the situation, without providing unnecessary information.

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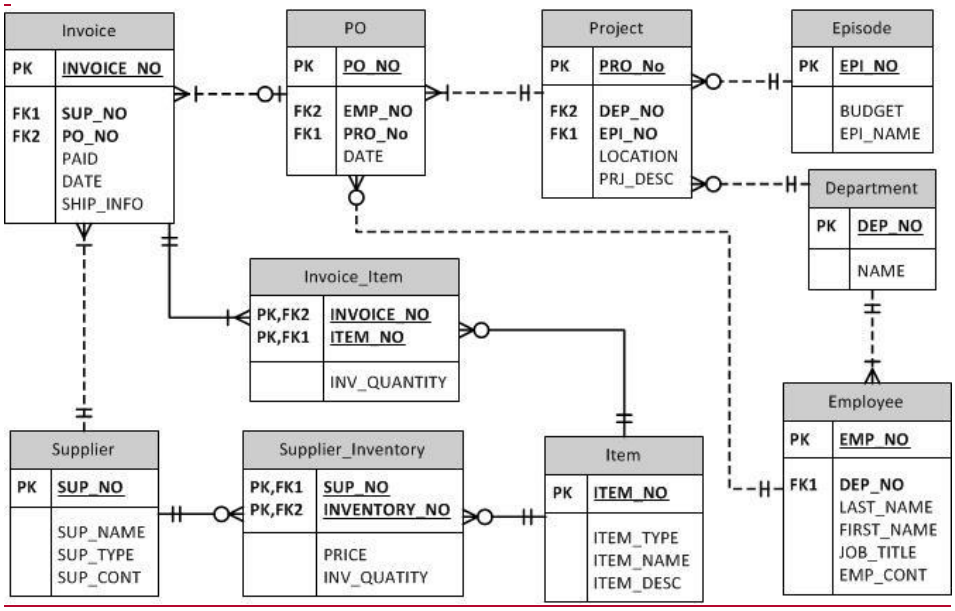

Relationship

PURCHASE_ORDER pays for INVOICE
1:M, non-identifying (INVOICE is paid by PURCHASE_ORDER)

SUPPLIER creates INVOICE
1:M, non-identifying (INVOICE is created by SUPPLIER)

INVOICE contains INVOICE_ITEM
1:M, identifying (INVOICE_ITEM must be contained by INVOICE)

SUPPLIER has SUPPLIER_INVENTORY
1:M, identifying (SUPPLIER_INVENTORY must be of SUPPLIER)

INVENTORY describes INVOICE_ITEM
1:M, identifying (INVOICE_ITEM must be described by INVENTORY)

INVENTORY describes SUPPLIER_INVENTORY
1:M, identifying (SUPPLIER_INVENTORY must be described by INVENTORY)

EMPLOYEE authorises PURCHASE_ORDER
_1:M, non-identifying (PURCHASE_ORDER is authorised by EMPLOYEE)

PROJECT has PURCHASE_ORDER
_1:M, non-identifying (PURCHASE_ORDER is of PROJECT)

EMPLOYEE works on SHOW
_1:M, non-identifying (SHOW is worked on by EMPLOYEE)

SHOW has EPISODE
_1:M, non-identifying (EPISODE belong to SHOW)

EPISODE has PROJECT
_1:M, non-identifying (PROJECT belong to EPISODE)

Attributes

Episode: EPI_NO, EPI_NAME, BUDGET
Department: DEP_NO, DEP_NAME
Project: PRJ_NO, EPI_NO, DEP_NO, LOCATION, PRJ_DESC
Employee: EMP_NO, DEP_NO, LAST_NAME, FIRST_NAME, JOB_TITLE, EMP_CONT
Purchase Order(PO): PO_NO, EMP_NO, PRJ_NO, PO_DATE,
Invoice: INV_NO, SUP_NO, PO_NO, INV_DATE, SHIP_INFO, PAID
Supplier: Sup_NO, SUP_NAME, SUP_TYPE, SUP_CONT
Supplier_Inventory: SUP_NO, ITEM_NO, PRICE, SUP_QUANTITY
Invoice_Item: INV_NO, ITEM_NO , INV_QUANTITY
Item: ITEM_NO, ITEM_NAME, ITEM_TYPE, ITEM_DESC_

Data Dictionary

Table	FieldName	Data type	Field length	Constraints	Description
Episode	EPI_NO	Varchar	10	Primary Key	Unique Identifier for Episode (PK)
Episode	EPI_NAME	Varchar	50	Not Null	Name of Episode
Episode	BUDGET	Decimal	10,2	Not Null	Amount of funds for Episode
Crew	PRJ_NO	Varchar	10	Primary Key, Foreign Key	Unique Identifier for Project(PK)
Crew	EMP_NO	Varchar	10	Primary Key, Foreign Key	Unique Identifier for Employees(PK)
Project	PRJ_NO	Varchar	10	Primary Key	Unique Identifier for Project (PK)
Project	EPI_NO	Varchar	10	Foreign Key	Reference to Unique Episode (FK)
Project	LOCATION	Varchar	50	Not Null	Location of Work for Project
Project	PRJ_DESC	Varchar	5000	Not Null	Description of Project
Employee	EMP_NO	Varchar	10	Primary Key	Unique Identifier for Employee (PK)
Employee	DEP_NAME	Varchar	10	Not Null	The departemnt of employees
Employee	LAST_NAME	Varchar	20	Not Null	Family Name of Employee
Employee	FIRST_NAME	Varchar	20	Not Null	Given Name of Employee
Employee	JOB_TITLE	Varchar	20	Not Null	Job Title of Employee
Employee	EMP_CONT	Varchar	500	Not Null	Employee Contact Information
Purchase Order(PO)	PO_NO	Varchar	10	Primary Key	Unique Identifier for PO (PK)
Purchase Order(PO)	EMP_NO	Varchar	10	Foreign Key	Reference to Unique Employee (FK)
Purchase Order(PO)	PRJ_NO	Varchar	10	Foreign Key	Reference to Unique Project (FK)
Purchase Order(PO)	PO_DATE	Date		Not Null	Creation Date of PO
Invoice	INV_NO	Varchar	10	Primary Key	Unique Identifier for Invoice (PK)

Invoice	SUP_NO	Varchar	10	Foreign Key	Reference to Unique Supplier (FK)
Invoice	PO_NO	Varchar	10	Foreign Key	Reference to Unique PO (FK)
Invoice	INV_DATE	Date		Not Null	Creation Date of Invoice
Invoice	SHIP_INFO	Varchar	500	Not Null	The destination of order item
Invoice	PAID	Decimal	10,2	Not Null	Payment Status of Invoice
Supplier	SUP_NO	Varchar	10	Primary Key	Unique Identifier of Supplier (PK)
Supplier	SUP_NAME	Varchar	20	Not Null	Name of Supplier
Supplier	SUP_TYPE	Varchar	20	Not Null	Type of Stock Carried
Supplier	SUP_CONT	Varchar	500	Not Null	Supplier Contact Information
Supplier_Inventory	SUP_NO	Varchar	10	Primary Key, Foreign Key	Reference to Unique Supplier (PK, FK)
Supplier_Inventory	ITEM_NO	Varchar	20	Primary Key, Foreign Key	Reference to Unique Item (PK, FK)
Supplier_Inventory	PRICE	Decimal	10,2	Not Null	Supplier's Unitary Price for Item
Supplier_Inventory	SUP_QUANTITY	Number		Not Null	Supplier's Stock Quantity
Invoice_Item	INVOICE_NO	Varchar	10	Primary Key, Foreign Key	Reference to Unique Invoice (PK, FK)
Invoice_Item	ITEM_NO	Varchar	10	Primary Key, Foreign Key	Reference to Unique Item (PK, FK)
Invoice_Item	INV_QUANTITY	Number		Not Null	Amount of Item Bought on Invoice
Item	ITEM_NO	Varchar	10	Primary Key	Unique Identifier for Item (PK)
Item	ITEM_NAME	Varchar	20	Not Null	Name of Item
Item	ITEM_TYPE	Varchar	20	Not Null	Type of Item
Item	ITEM_DESC	Varchar	5000	Not Null	Description of Item

Gantt Chart

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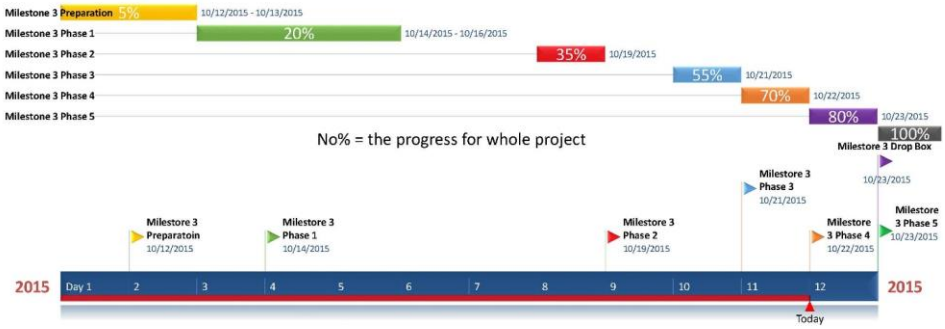

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

9. Meeting Specifics

Type:	**Milestone3- phase 1**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-14	**Start Time:**	2:30pm	**End Time:**	3:30pm
Meeting Host:	Zach		**Location:**	Free table in Second floor SW 1	
Minute Taker:	York				

10. Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	20%
Zach Yu	Yes	Coordinator	20%
Peter	Yes	Team Member	10%
York	Yes	Time Scheduler	10%

11. Agenda

Id	Topic	Presenter	Times
1	Assign the task for each team member	Zach and Andrew	2015-10-14
2	Append any updates to the detailed proposal	Zach	2015-10-14

12. Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Review milestone 1 and 2	All team member	Done
2	Make decision for each role of group member in milestone3 A, Zach will review and re-edit milestone2 B, Andrew will create entity and attributes, describe function and relationship for them C, York will do project schedule and track progress with gantt chart D, Peter will plan to draw ER diagram	All team member	In process

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1. Meeting Specifics

Type:	**Milestone3- phase 2**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-19	**Start Time:**	4:30pm	**End Time:**	5:30pm
Meeting Host:	Zach	**Location:**	Meeting Room-2118-SW01		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	50%
Zach Yu	Yes	Coordinator	30%
Peter	Yes	Team Member	35%
York	Yes	Time Scheduler	30%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Review the feedback about milestone 2 from instructor Benjamin	Zach	2015-10-19
2	ER diagram discussion	All team member	2015-10-19

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Process
1	Milestone 2 update A, add two user stories	Zach	50% finished , need to build another user stories
2	ER diagram discussion and update A, Rebuild ER Diagram B, Add at least three entity in the ER diagram. C, Discuss the relationship among inventor, invoice and supplier	Peter Zach , Andrew and York	In process

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone3- phase 3**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-21	**Start Time:**	2:30pm	**End Time:**	3:30pm
Meeting Host:	Zach		**Location:**	Meeting Room-2515-SW01	
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	70%
Zach Yu	Yes	Coordinator	60%
Peter	Yes	Team Member	50%
York	Yes	Time Scheduler	50%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Task review for each team member	All team member	2015-10-21
2	project update	All team member	2015-10-21

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	A, Create online document for DB group ; B, Share new edited with milestone2; C, Zach will work with Peter to finish ERD D, Zach will update the entity somewhat;	Zach	A, Done B, Done C, in process D, in process
2	A, Update progress for each task ; B, Gantt chart building is still on the way; C, Report every cases happened in meeting;	York	A, Done B, in process
3	Show and explain the relationship about each entity for the part of draw ERD, It includes PO Request, invoice, purchaser, supplier, inventory;	Peter	in process
4	A, Share understanding about whether or not the entity is necessary to add in the ERD; B, Andrew will build relationship on the basis of Zach's entity	Andrew	A, Done B, in process

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone3- phase 4**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-22	**Start Time:**	5:30pm	**End Time:**	6:30pm
Meeting Host:	Zach	**Location:**	Meeting Room-2515-SW1		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	75%
Zach Yu	Yes	Coordinator	80%
Peter	Yes	Team Member	75%
York	Yes	Time Scheduler	70%

3.Agenda

Id	Topic	Presenter	Time/Status
1	ER diagram discussion and update	All team member	2015-10-22
2	project review and update	All Team member	2015-10-22

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Entity discussion A, Delete previous entity "SHOW" ; B, Add new entity "Department" in ERD; C, analyse the relationship among each entity, it includes, Employee, Episode, Purchaser, Project, Invoice, Supplier, Invoice-item and Inventory;	All team member	A, Done B, Done C, Done

No.	Subject/Description	Owner	Status & Progress
2	add new attribute for each entity	Andrew Zach	Done
3	Andrew describe each attribute under entity;	Andrew	In process
4	A, Drew ERD through using Microsoft Viso B, Delete useless user stories	Zach	Done
5	User stories update A, Added new user story in milestone3 by peter; B, added two new user stories by Andrew and one new user story by York	Peter Andrew York	Done
6	Data Dictionary discussion	Zach	In process Zach will do the data dictionary

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Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone3- phase 5**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-10-23	**Start Time:**	4:30pm	**End Time:**	5:30pm
Meeting Host:	Zach		**Location:**	Meeting Room-2513	
Minute Taker:	York				

2. Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	100%
Zach Yu	Yes	Coordinator	100%

Name	Attendance status	Position	Progress
Peter	Yes	Team Member	100%
York	Yes	Time Scheduler	100%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Project update	All team member	2015-10-23
2	edit each document and Final discussion (drop box)	All team member	2015-10-23

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Each attribute have been described	Andres	Done
2	Data dictionary will be done before the last meeting	Zach, Andres Peter	In process
3	Project schedule file and Gantt chart will be done after the last meeting	York	In process
4	The ERD update and is completed over 90% by Zach and Peter	Zach and Peter	In process

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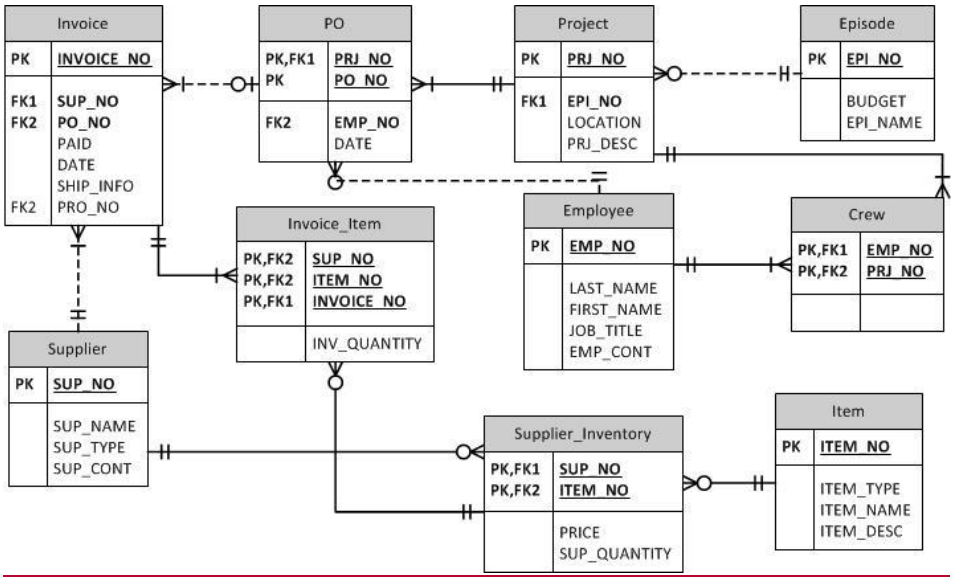
Milestone4

a. Normalized ER diagram. Describe how the ER diagram in Milestone 3 is transformed to higher normalized forms.



Our ER diagram was almost in the 3rd normalized form in milestone 3, we made a little change on the ER diagram. We removed department entity and added crew to represent the relationship between project and employee, and fixed the relationship between invoice item, item, and supplier inventory.

Our ER diagram are now checked for dependencies, we have identified primary keys and get rid of partial dependency, transitive dependency, and multi-valued. They are all just functional dependent on the primary keys.

b. Sample Tables with actual data. Describe and give examples how information required by stakeholders in Milestone 1 and data sources in Milestone 2 are stored / retrieved from the tables.

SELECT *

FROM Episode

EPI_NO	EPI_NAME	BUDGET
1	Flash01	1234567
2	Flash02	803520
3	Flash03	786932

3 rows selected. 0.00 seconds

```
SELECT *
  FROM Supplier
```

SUP_NO	SUP_NAME	SUP_TYPE	SUP_CONT
1	Crash Car	Equipment	202-556-0303
2	Sony professinal camera	Equipment	202-556-0304
3	A&W	Equipment	202-556-0305
4	Rent the Runway	Dress	202-556-0306
5	Nikon professional camera	Equipment	202-556-0307
6	The Hunting Ground	Place	202-556-0308
7	Solaway Travel Ltd	Travel	202-556-0309
8	Shiseido	Makeup	202-556-0310
9	Digital Capcom	Studio	202-556-0311

9 rows selected. 0.01 seconds

```
SELECT *
  FROM Project
```

PRJ_NO	EPI_NO	LOCATION	PRJ_DESC
1	1	Vancouver	Driving scene around Cambie; 50 crew members
2	2	Los Angeles	A kissing scene in the rain with 30 crew members

2 rows selected. 0.00 seconds

SELECT *

FROM Item

ITEM_NO	ITEM_NAME	ITEM_TYPE	ITEM_DESC
1	Sports Cars	Equipment	Rental Lexus, BMW, Audi
2	360 degree camera	Equipment	Sony professional 360 degree camera for movie
3	Mozo Combo	Food	beef burgers, french fries, roots beer
4	Markup set	Markup	professional cosmetic composition
5	Rooftop	place	The Mark Towers rooftop
6	Uncle Combo	Food	beef burgers, french fries, roots beer

6 rows selected. 0.01 seconds

SELECT *

FROM Employee

EMP_NO	DEP_NAME	LAST_NAME	FIRST_NAME	JOB_TITLE	EMP_CONT
1	Equipment	Vega	Andres	Technical Director	202-555-0138
2	Equipment	Fox	Akyssa	Equipment Maintence	202-555-0130

3	Photography	Jacobs	Verna	Leader of Photography	202-555-0185
4	Actors	Mills	Patrick	Supporting Actor	202-555-0170
5	Gaffers	Lee	Stan	Craft Service Person	202-555-0198
6	Stylist	Brooks	Marty	Makeup Artist	202-555-0102
7	Stage Manager	Blake	Lionel	Chief Stage Manager	202-555-0232
8	Stage Manager	Chen	Jacky	Chief Lighting Director	202-555-0254
9	Special Effects	Ray	Matt	Special FX	202-555-0298
10	Sound and Music	Fuller	Angel	Sound Engineer	202-555-0276

10 rows selected. 0.01 seconds

SELECT *

FROM Crew

PRJ_NO	EMP_NO
1	1
1	2
1	3
1	4
1	5

1	6
1	7
1	8
1	9
2	10
2	3
2	4
2	5
2	6
2	7
2	8
2	9

17 rows selected. 0.01 seconds

SELECT *

FROM PO

PO_NO	EMP_NO	PRJ_NO	PO_DATE
1	2	1	11/17/2015
2	3	1	11/17/2015
3	5	1	11/17/2015
4	6	2	11/22/2015
5	7	2	11/22/2015

6	5	2	11/22/2015

6 rows selected. 0.01 seconds

SELECT *

FROM Invoice

INV_NO	SUP_NO	PO_NO	INV_DATE	SHIP_INFO
1	1	1	11/18/2015	Shipping to Vancouver
2	3	3	11/18/2015	Shipping to Vancouver
3	2	2	11/18/2015	Shipping to Vancouver
4	8	4	11/22/2015	Shipping to Los Angeles
5	6	5	11/22/2015	Shipping to Los Angeles
6	3	6	11/22/2015	Shipping to Los Angeles

6 rows selected. 0.01 seconds

SELECT *

FROM Supplier_Inventory

SUP_NO	ITEM_NO	PRICE	SUP_QUANTITY
1	1	200000	3
2	2	100000	1
3	3	20	50
8	4	2000	2
6	5	100000	1

3	6	20	30

6 rows selected. 0.00 seconds

SELECT *

FROM Invoice_Item

SUP_NO	INV_NO	ITEM_NO	INV_QUANTITY
1	1	1	3
2	3	2	1
3	2	3	50
8	4	4	2
6	5	5	1
3	6	6	50

6 rows selected. 0.00 seconds

c. Sample SQL statements. Describe and give examples of SQL statements used to store / access / update data in the database.

SELECT INV_NO

FROM Invoice

INV_NO
1
2
3
4

5
6

6 rows selected. 0.01 seconds

```
SELECT PO.PRJ_NO, SUM(price)
  FROM Supplier_Inventory si INNER JOIN Invoice_Item bi
    ON si.SUP_NO = bi.SUP_NO
    AND si.ITEM_NO = bi.ITEM_NO
  INNER JOIN Invoice inv
    ON bi.INV_NO = inv.INV_NO
  INNER JOIN PO
    ON PO.PO_NO = inv.PO_NO
  GROUP BY PO.PRJ_NO
```

PRJ_NO	SUM(PRICE)
1	300020
2	102020

2 rows selected. 0.01 seconds

```
SELECT SUP_TYPE
  FROM Supplier
```

SUP_TYPE
Equipment
Equipment
Equipment

Dress
Equipment
Place
Travel
Makeup
Studio

9 rows selected. 0.01 seconds

SELECT *

FROM PO

PO_NO	EMP_NO	PRJ_NO	PO_DATE
1	2	1	11/17/2015
2	3	1	11/17/2015
3	5	1	11/17/2015
4	6	2	11/22/2015
5	7	2	11/22/2015
6	5	2	11/22/2015

6 rows selected. 0.01 seconds

SELECT PO_NO, COUNT(INV_NO)

FROM Invoice

GROUP BY PO_NO

PO_NO	COUNT(INV_NO)

1	1
3	1
6	1
5	1
2	1
4	1

6 rows selected. 0.01 seconds

SELECT SHIP_INFO

FROM Invoice

WHERE PO_NO = '1'

SHIP_INFO
Shipping to Vancouver

Statement processed. 0.01 seconds

SELECT PO_NO, to_date(PO_DATE, 'MM/DD/YYYY')

FROM PO

PO_NO	TO_DATE(PO_DATE,'MM/DD/YYYY')
1	11/17/2015
2	11/17/2015
3	11/17/2015
4	11/22/2015
5	11/22/2015

6	11/22/2015

6 rows selected. 0.00 seconds

```
SELECT (SELECT SUP_NAME
FROM Supplier
WHERE SUP_NO = '3'
) AS SUP_NAME,COUNT(INV_NO) AS INV_NUM
  FROM Invoice
  WHERE SUP_NO = '3' AND INV_DATE=to_date('22/11/2015','DD/MM/YYYY')AND SHIP_INFO NOT LIKE '%PICK UP%'
GROUP BY SUP_NO
```

SUP_NAME	INV_NUM
A&W	1

Statement processed. 0.02 seconds

```
SELECT EMP_NO, FIRST_NAME||LAST_NAME AS Name, DEP_NAME
  FROM Employee
```

EMP_NO	NAME	DEP_NAME
1	AndresVega	Equipment
2	AkyssaFox	Equipment
3	VernaJacobs	Photography
4	PatrickMills	Actors
5	StanLee	Gaffers
6	MartyBrooks	Stylist

7	LionelBlake	Stage Manager
8	JackyChen	Stage Manager
9	MattRay	Special Effects
10	AngelFuller	Sound and Music

10 rows selected. 0.01 seconds

SELECT ii.ITEM_NO, INV_QUANTITY, SUP_QUANTITY

FROM Invoice_Item ii LEFT JOIN Supplier_Inventory si

ON ii.ITEM_NO = si.ITEM_NO

AND ii.SUP_NO = si.SUP_NO

ITEM_NO	INV_QUANTITY	SUP_QUANTITY
1	3	3
2	1	1
3	50	50
4	2	2
5	1	1
6	50	30

6 rows selected. 0.01 seconds

Download

Run By	ANDREW
Parsing Schema	KODIAK
Script Started	Friday, November 13, 2015
	3 seconds ago

Elapsed time	0.25 seconds
Statements Processed	20
Successful	20
With Errors	0

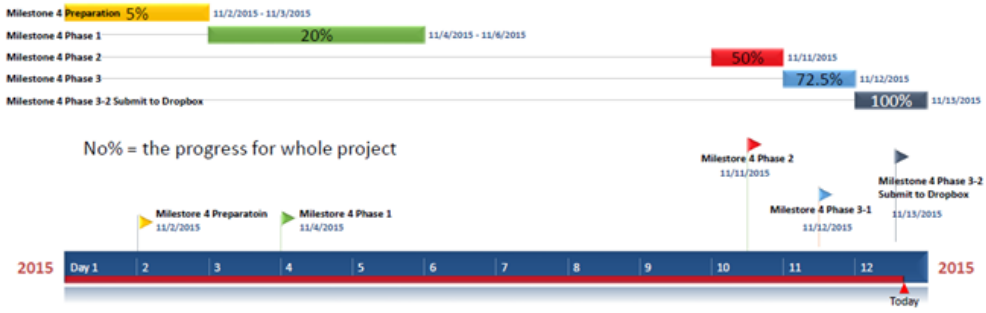
d. Referential Integrity. Describe and give examples of integrity constraints imposed on the data through relationships in Milestone 3 are implemented in the database.

One foreign key in an entity would only refer to one another entity's attribute which must be unique, so it will not refer to something not exist or refer to one thing that is exact same as another. In our ER diagram, the foreign key will refer to other entity's primary key which is unique and identical. For example, the item number 1 in supplier inventory entity, is exactly the refer to item number 1 in item entity, it will not be item number 2 or item number 3 or something not in the item entity.

Gantt Chart

The detail are presented under the Gantt Chart diagram

The detail include: meeting date , start time and end time , meeting participation, meeting location, meeting attendees, meeting agenda, meeting status update and results, member roles description, detail tasks each member did, project progress update;



Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

13. Meeting Specifics

Type:	**Milestone4- phase 1**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-11-04	**Start Time:**	4:30pm	**End Time:**	6:30pm
Meeting Host:	Zach		**Location:**	Meeting Room-2187-SW01	
Minute Taker:	York				

14. Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	20%
Zach Yu	Yes	Coordinator	20%
Peter	Yes	Team Member	20%
York	Yes	Time Scheduler	20%

15. Agenda

Id	Topic	Presenter	Times
1	Review and discuss the comments provided by the instructor on milestone 3	All team member	2015-11-04
2	Assign the task of milestone 4 for each team member	All team member	2015-11-04

16. Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Review milestone 3 A, change gantt chart format and make it more detail – handled by York B, add Ship_info in the data dictionary and provide more details – handled by Zach	York Zach Andrew	In process

No.	Subject/Description	Owner	Status & Progress
	C, user story 10(delivery information) explanation - handled by Andrew		
2	Make decision for each role of group member in milestone4 Peter--- 1), make change to previous milestones using Track Changes. 2), collect all the files (include all previous milestones) with track changes as appendices. Zach---describe and give examples how information required by stakeholders in Milestone 1 and data sources in Milestone 2 are stored from the tables Andrew---describe and give examples of SQL statements used to store data in the database York---build Gantt chart, make schedule and report detail that happen in every meeting.	All team member	In process

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1. Meeting Specifics

Type:	**Milestone4- phase 2**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-11-11	**Start Time:**	2:30pm	**End Time:**	4:30pm
Meeting Host:	Zach		**Location:**	Meeting Room-2187-SW01	
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	60%
Zach Yu	Yes	Coordinator	50%

Name	Attendance status	Position	Progress
Peter	Yes	Team Member	40%
York	Yes	Time Scheduler	50%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Review and update the task that assigned last meeting	Zach	2015-11-11
2	Go through all the task team completed and make plan & schedule for next meeting	All team member	2015-11-11

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Process
1	SQL statement update	Andrew	
2	User story update : 1) delete the parts of "what else needs to purchase" in user story 5 2) delete user story 12	Andrew , Peter	In process
3	Normalize ER Diagram : 1)Add new attributes for both entity supplier_Inventory and Invoice_Item---by Zach 2)make new connection between entity supplier_Inventory and Invoice_Item---by Zach and Andrew 3) use new entity "Crew" to replace old entity "Department" and build new relationship among "Crew" "Project" "Employee" : Project : Crew ---- 1:M Employee : Crew ---- 1:M By Zach, Peter and Andrew	Zach, Peter, Andrew	In process
4	Go through all the task: 1) all files is going to be collected by Peter and make Track changes; 2) Describe how the ER diagram in Milestone 3 is transformed to higher normalized forms by Peter	All team member	In process

No.	Subject/Description	Owner	Status & Process
	3) build sample table with actual data (this part need to update again later) by Zach 4) rebuild data dictionary by Zach 5) SQL statement update(include entity description) by Andrew 6) Gantt chart is in process according to the progress in each meeting		
5	Referential Integrity discussion : Definition analyze , by peter More task in Referential Integrity will be schedule on 12th Nov 2015	All team member	In process

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone4- phase 3-1**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-11-12	**Start Time:**	5:30pm	**End Time:**	7:30pm
Meeting Host:	Zach	**Location:**	Burnaby SE14 Library – 250C		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	80%
Zach Yu	Yes	Coordinator	70%
Peter	Yes	Team Member	70%
York	Yes	Time Scheduler	70%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Task review for each team member and check the progress for whole project	All team member	2015-11-12
2	Discuss the task which exist problem and make solution	All team member	2015-11-12

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	user story 12 and the parts of "what else needs to purchase" in user story 5 have already deleted by Peter	Peter	Done
2	ER Diagram Normalization	Zach	Done
3	Sample data for SQL form is in processing.	Zach	In process
4	SQL statement have done by Andrew	Andrew	Done
5	Referential Integrity will be handled by Peter	Peter	In process
6	Gantt chart update for milestone 4	York	In process

Document Information

Project Name:	**ACIT1630 DB Project**
Project Manager:	York Liu
Prepared By:	York Liu

1.Meeting Specifics

Type:	**Milestone4- phase 3-2**				
Purpose:	Ongoing information sharing and project status update				
Meeting Date:	2015-11-13	**Start Time:**	3:30pm	**End Time:**	5:30pm
Meeting Host:	Zach	**Location:**	Free table-2 Floor-SW1		
Minute Taker:	York				

2.Meeting Attendees

Name	Attendance status	Position	Progress
Andrew	Yes	Team Leader	100%
Zach Yu	Yes	Coordinator	100%
Peter	Yes	Team Member	100%
York	Yes	Time Scheduler	100%

3.Agenda

Id	Topic	Presenter	Time/Status
1	Update the unfinished task	All team member	2015-11-13
2	Collect all the file and update to the new version	Peter	2015-11-13
3	Gantt Chart update	York	2015-11-13

4.Meeting Status Update and Results

Results Table

No.	Subject/Description	Owner	Status & Progress
1	Sample data for SQL form update	Zach	Done
2	Referential Integrity update	Peter	Done
3	Collect all the project file from all team member to one document	Peter	Done