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# Part A – Project Planning

Business Overview –

Needs to design a database for Queens Street Video Game Rental Shop which consists of employees , products , members and inventory. To manage all the transactions and which employee has done the sales for which product . Manager wants to see the sales for the period of time , so that he/she can take business decisions to improve overall sales. Manage wants to see how many members have been created and manage them , which again help in business decisions . All the reports needs to be created in which all transactions and by whom , all the details should be created accordingly.

Business requirements –

The company structure- 1 manager, 2 shop attendants and one back office IT person who is also the DBA. They are identified by an employee ID. The game shop has an inventory to organize its games by genre. The games are identified by a product ID, and have a price, the video games are shipped directly from US and Japan.

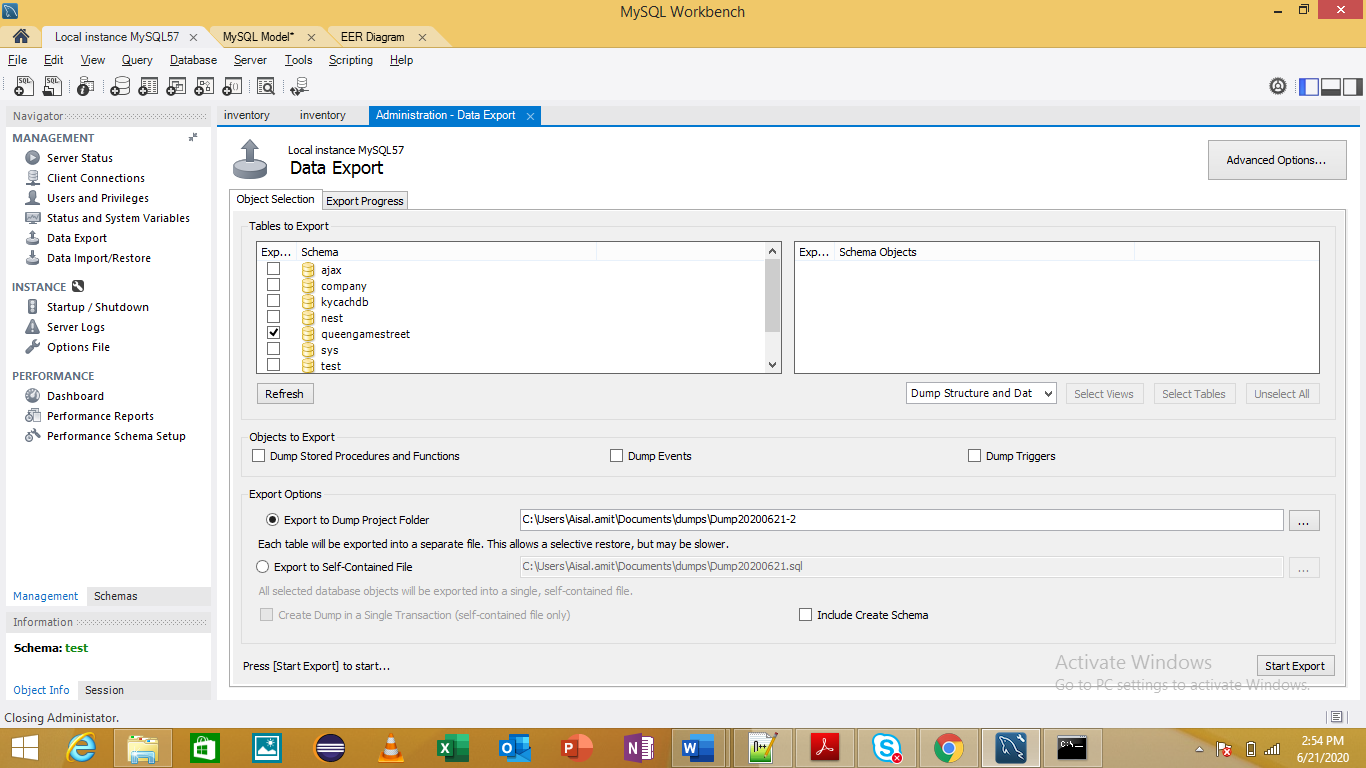
The members buy games from employees. They have membership plans like monthly rental, weekly rental and daily rental. The system also stores member ID, member name, member Phone number and address.

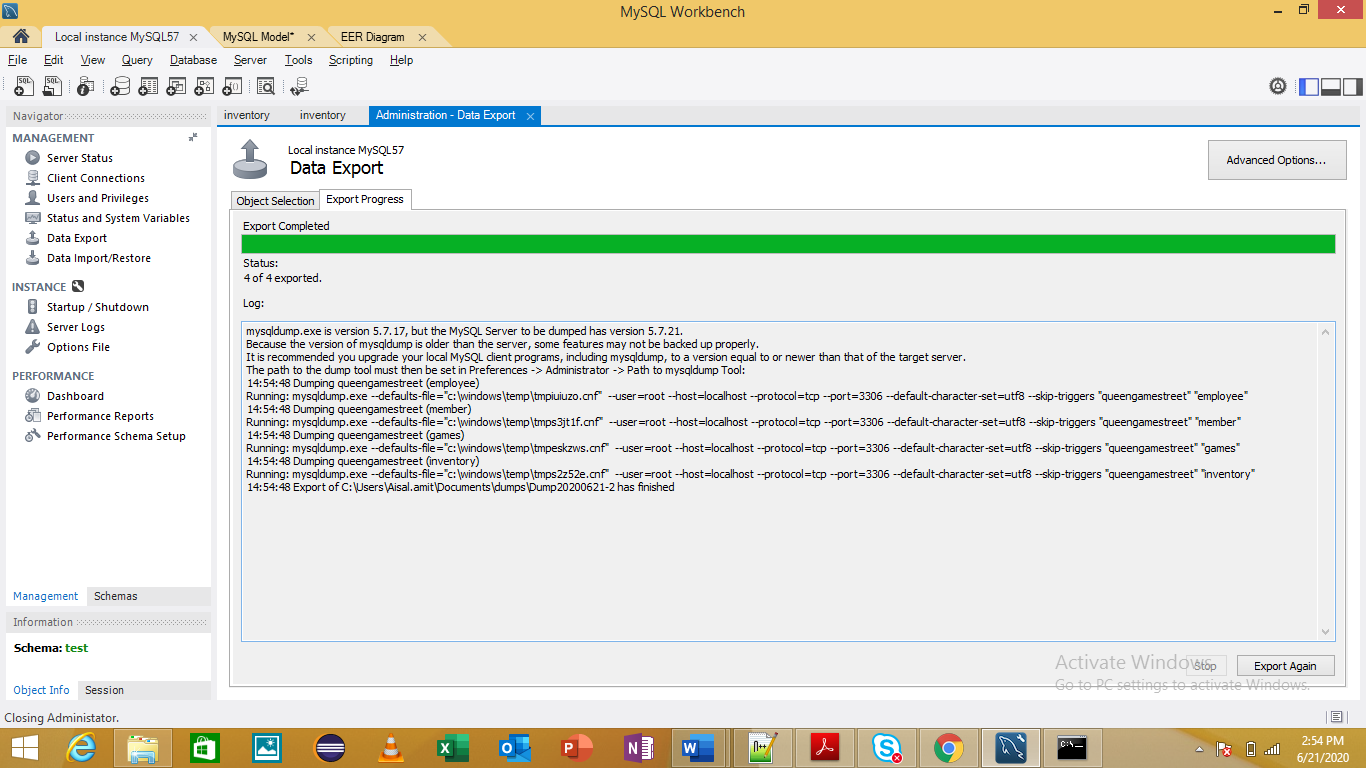
Expected Project Outcomes –

* 1. Export Files , ER diagram

Technical and administrative details –

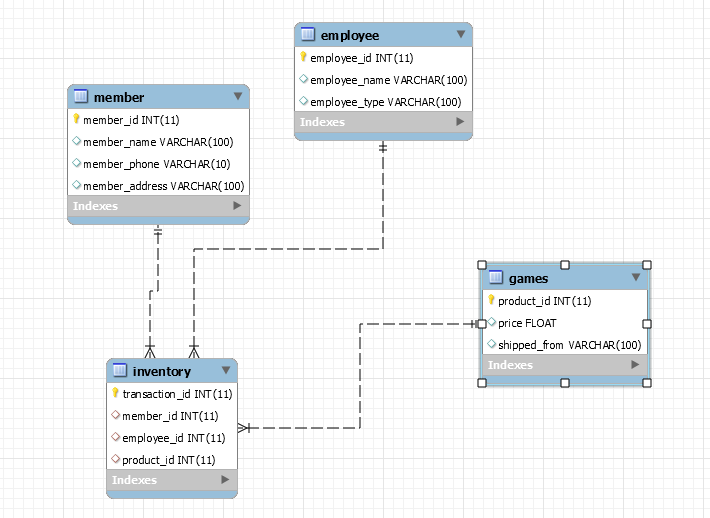
* 1. *DBMS software used : Mysql Workbench,*
  2. *Storage : MySQL Database*
  3. *Backup : Mysql Dumps*





# Part B – Database Design

ER Diagram –



Relational schemas –

* 1. Games
  2. Member
  3. Employee
  4. inventory

Normal Forms : Applied 1st NF , 2nd NF and 3rd NF

# Part C – Database Implementation and Testing

**Database Implementation** –

Create database queengamestreet

**The tables and their relationships**

CREATE TABLE `employee` (

`employee\_id` int(11) NOT NULL,

`employee\_name` varchar(100) DEFAULT NULL,

`employee\_type` varchar(100) DEFAULT NULL,

PRIMARY KEY (`employee\_id`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8;

 CREATE TABLE `games` (

`product\_id` int(11) NOT NULL,

`price` float DEFAULT NULL,

`shipped\_from` varchar(100) DEFAULT NULL,

PRIMARY KEY (`product\_id`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8;\

CREATE TABLE `inventory` (

`transaction\_id` int(11) NOT NULL ,

`member\_id` int(11) DEFAULT NULL references member(member\_id),

`employee\_id` int(11) DEFAULT NULL references employee(employee\_id),

`product\_id` int(11) DEFAULT NULL references games(product\_id),

PRIMARY KEY (`transaction\_id`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8;

CREATE TABLE `member` (

`member\_id` int(11) NOT NULL,

`member\_name` varchar(100) DEFAULT NULL,

`member\_phone` varchar(10) DEFAULT NULL,

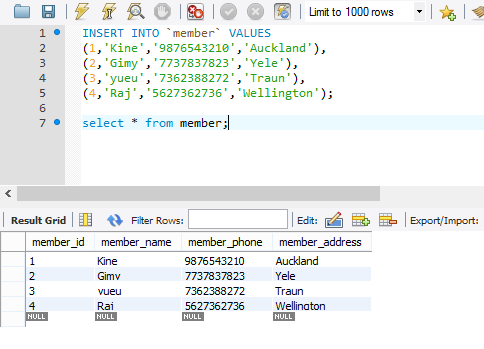
`member\_address` varchar(100) DEFAULT NULL,

PRIMARY KEY (`member\_id`)

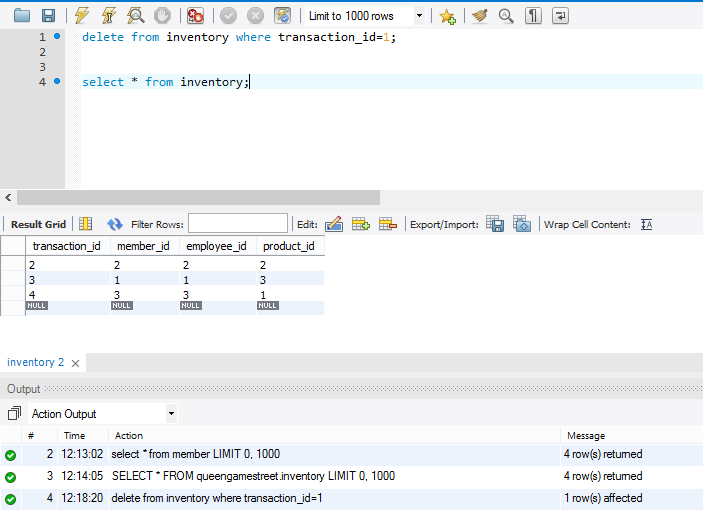
) ENGINE=InnoDB DEFAULT CHARSET=utf8;

2. Database Testing

1. *Populate your database*



1. *Testing Deleting the records*



1. *Test relationship between the tables*

