**STUDENT NAME: ANDREI MARCU**

**STUDENT ID: ANM1762**

3.)

i) List information about all student members.

SELECT \* FROM MEMBER WHERE member-type = ‘student’;

ii) SELECT \* FROM RENTAL WHERE date-out = ‘01-JAN-2009’ AND date-due = ‘03-JAN-2009’;

iii) SELECT title, rating FROM DVD WHERE category = ‘Horror’;

iv) SELECT title, category, rating FROM DVD LEFT JOIN RENTAL ON DVD.DVD-code = RENTAL.DVD-code LEFT JOIN MEMBER ON RENTAL.member-id = MEMBER.member-id WHERE MEMBER.member-id = ‘Smith’;

v.) SELECT name, addresses FROM MEMBERS LEFT JOIN RENTAL ON MEMBER.member-id = RENTAL.member-id LEFT JOIN DVD ON RENTAL.DVD-code = DVD.DVD-code WHERE DVD.rating = ‘PG’ AND DVD.rating = ‘12A’;

4.)

i.) Example of an Entity type:

Person is an example of an entity.

ii.) Example of Attribute list;

Attributes of an entity person could be; *name, age, address, nationality* etc.

iii.) Optional Relationship:

Given two Entity BookStore and Person, A Person can purchase 0 or many books from the bookstore.

iv.)

4b.)

Using entity Book with attribute *id, title and author.*

i) SELECT \* FROM BOOK WHERE title = ‘The Strangers’;

ii)

iii.) INSERT INTO BOOK VALUES (10, ‘The Gods’, ‘Lord Sharon’);

iv.) DELETE FROM BOOK WHERE title = ‘The Gods’;

5.)

Department Table

Dept no. —-----------pk

Dphone

location

On the department table, the dept-no can be used to uniquely identify each row on the table, hence it is used as the primary key. While on the course table also the course-code is unique thus it can be used as a primary key on the table. Since there is a relationship between the course table and the department table, a foreign key of dept-no is added to the course table and a lecturer id number which is the contract no is also added to the course table. And also a unit-code as foreign key.

Course Table

Course-code —-------------pk

Course-name

Dept-no —-------------------fk

Contract-no —--------------fk

Unit-code—--------------fk

The unit table contains the unit-code which is primary key and foreign key on the course table.

Unit Table

Unit-code —-----------------pk

Unit-name

Prerequisite

Lecturer Table

Contract-no —--------------pk

lname

laddresss

Bdate

Permanent Lecturer Table:

Contract-no —-----------------pk

Pension-no

Annual-salary

Job-grade

job-title

dept no—-----------------------fk

Temporary Lecturer Table;

Contract-no —-------------------pk

Rate-of-pay

The lecturer table was further splitted into three with a table for all lecturers and another table for permanent lecturer and another one for temporary lecturer with the contract-no which is the lecturer id is present on the 3 tables as a primary key