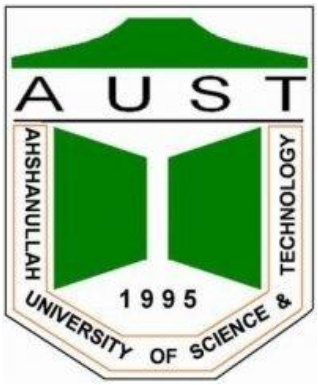
Ahsanullah University of Science and Technology



Distributed Database Lab

CSE 4126

Project name: National patient Management System.

Submitted by:

Farzana Sharmin Mou (15-01-04-076)

Submitted to:

Mr. Mohammad Imrul Jubair
Asst. Prof., AUST

Mrs. Safun Nesa Saira
Lecturer, AUST

National Patient management system

Project Abstract:

This will be a database of patient management system which will be able to be operated nationally. There will be the information of all patients around Bangladesh so that when a patient will go to a new doctor at new hospital, they will be able to check his/her past history through this database. So, the diagnosis will be more perfect and easy for the doctor and patient will be benefited at most.

User of this database:

Hospital authority.

Need of having distributed database for this project:

As this will be a national patient database so the data will be entered from every hospital around Bangladesh. That's why we need distributed database management system.

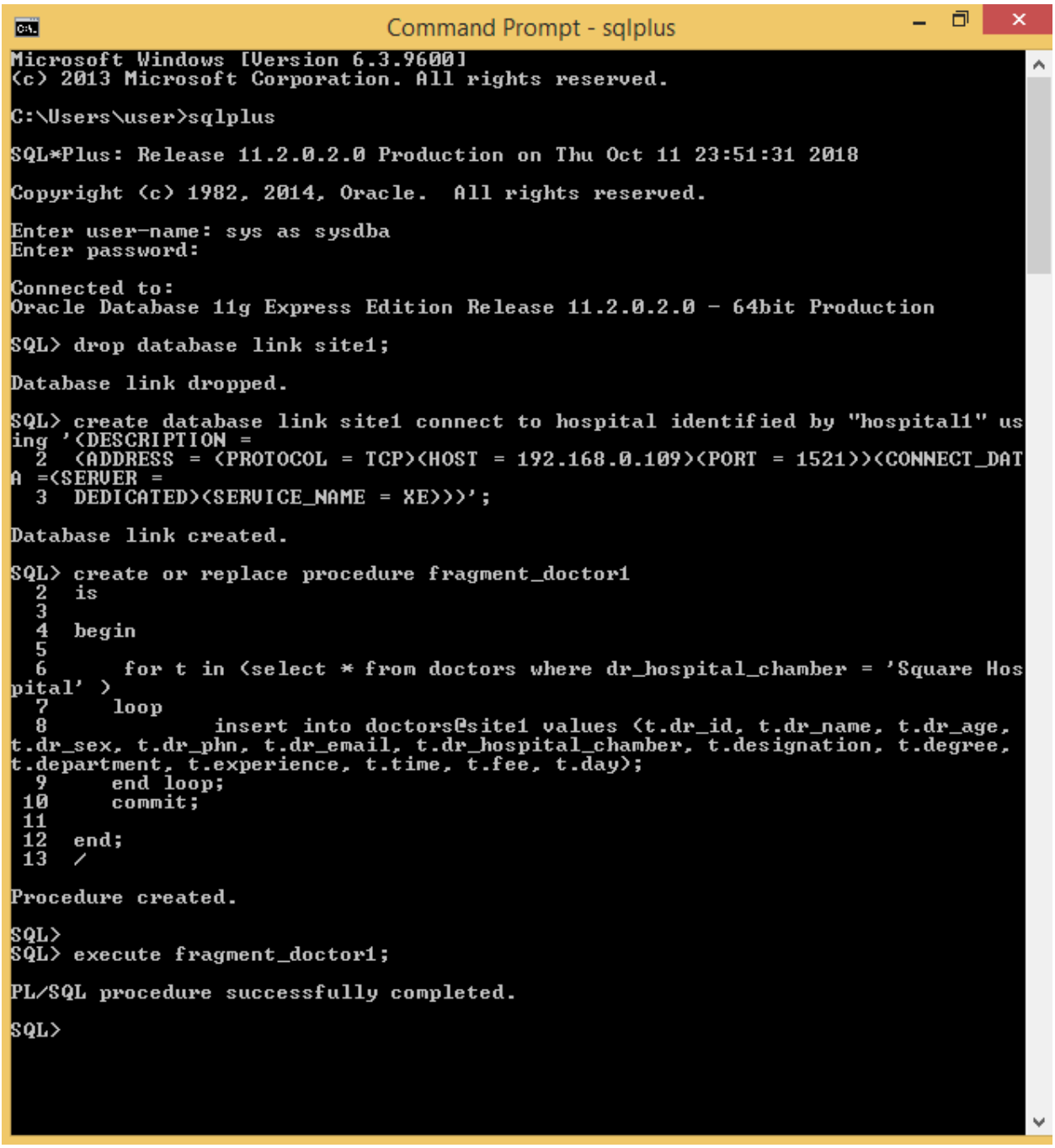
Global relations of this project:

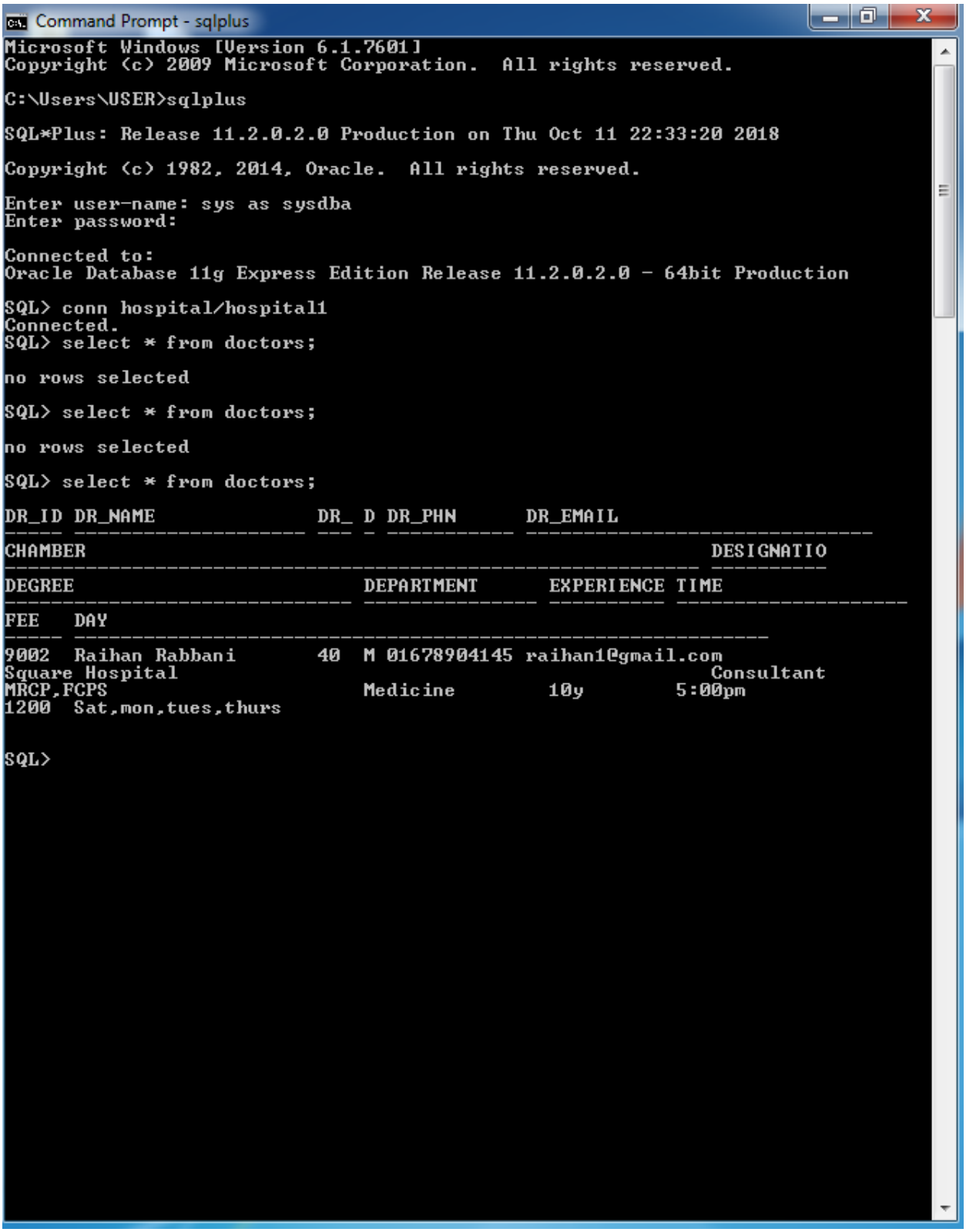
- **Doctors** (dr_id, dr_name, dr_age, dr_sex , dr_phn, dr_email, dr_hospital_chamber, designation, degree, department, experience, time,
  Fee, day, primary key (dr_id))
- **Reports** (rep_id, rep_date, impression, primary key (rep_id))

- **Medicine** (med_id, med_name, med_generic_name, med_company, med_work, med_per_price, primary key (med_id))
- **Diagnosis** (dia_id, dia_name, dia_cost, dia_requirements, dia_hospital, rep_id, primary key (dia_id), foreign key(rep_id) references reports(rep_id))
- **History** (his_id, his_date, problem, rep_id, dr_id, med_id, primary key (his_id), foreign key(rep_id) references reports(rep_id), foreign key(dr_id) references doctors(dr_id), foreign key(med_id) references medicine(med_id))
- **Surgical_history** (s_his_id, s_date, s_name, s_hospital, s_cost, dr_id, primary key (s_his_id), foreign key(dr_id) references doctors(dr_id))
- **Patient** (pt_id, pt_name, pt_age, pt_sex, pt_phn, pt_house, pt_road, pt_block, pt_section, pt_district, bl_grp, weight, height, dia_id, his_id, s_his_id, primary key (pt_id), foreign key(dia_id) references diagnosis(dia_id), foreign key(his_id) references history(his_id), foreign key(s_his_id) references surgical_history(s_his_id))

Fragments of this project:

- Doctors1 = $SL_{dr\_hospital\_chamber="Square\ Hospital"}$ Doctors
- Doctors2 = $SL_{dr\_hospital\_chamber="Medinova\ Diagnostic"}$ Doctors


Command Prompt - sqlplus
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Users\user>sqlplus
SQL*Plus: Release 11.2.0.2.0 Production on Thu Oct 11 23:51:31 2018
Copyright (c) 1982, 2014, Oracle. All rights reserved.
Enter user-name: sys as sysdba
Enter password:
Connected to:
Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit Production
SQL> drop database link site1;
Database link dropped.
SQL> create database link site1 connect to hospital identified by "hospital1" us
ing '(DESCRIPTION =
2 (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.0.109)(PORT = 1521))(CONNECT_DAT
A =(SERVER =
3 DEDICATED)(SERVICE_NAME = XE)))';
Database link created.
SQL> create or replace procedure fragment_doctor1
2 is
3
4 begin
5
6 for t in (select * from doctors where dr_hospital_chamber = 'Square Hos
pital')
7 loop
8 insert into doctors@site1 values (t.dr_id, t.dr_name, t.dr_age,
t.dr_sex, t.dr_phn, t.dr_email, t.dr_hospital_chamber, t.designation, t.degree,
t.department, t.experience, t.time, t.fee, t.day);
9 end loop;
10 commit;
11
12 end;
13 /
Procedure created.
SQL>
SQL> execute fragment_doctor1;
PL/SQL procedure successfully completed.
SQL>



Sites of this project:

- Site1 (Square Hospital) : Doctors1, patient, reports, medicine, diagnosis, history, surgical_history.
- Site2 (Apollo Hospital) : Doctors2, patient, reports, medicine, diagnosis, history, surgical_history.

Triggers of this project:

- Trigger 1: There are two tables at site 1 where male and female patients are differentiated.
- Trigger 2: There is a new table at site 1 when a phone number of a patient is changed it is stored there.

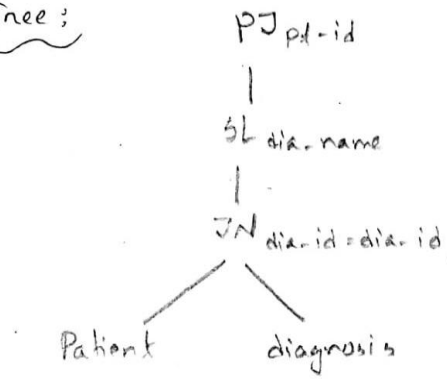
Level-3 distribution transparency:

If a doctor of Square hospital changes his chamber to Medinova diagnostic center then his information will be deleted from site 1 and inserted to site 2.

Operator Tree:

Q: $\Pi_{Pt\_id}\ \sigma_{dia\_name}\ (Patient \bowtie_{dia\_id = dia\_id} diagnosis)$

Operator Tree:



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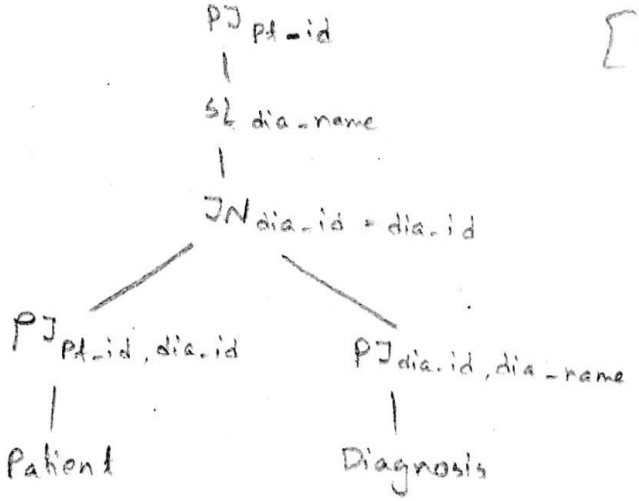

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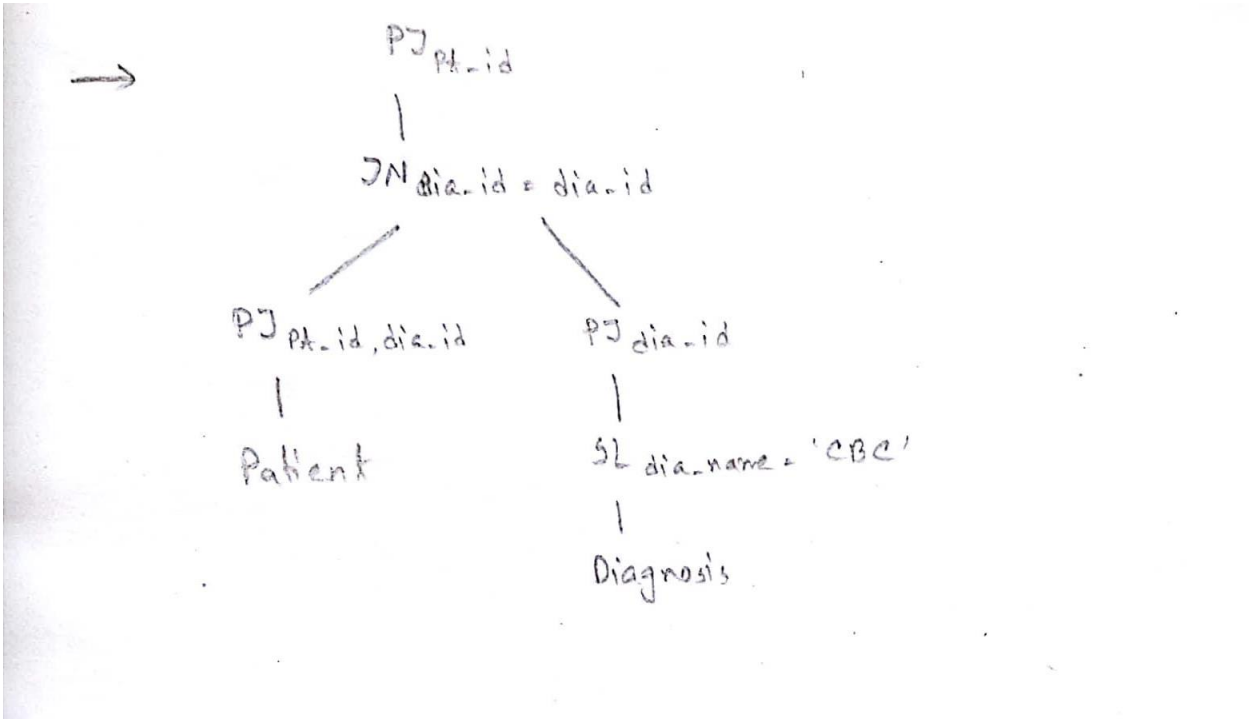

Conclusion:

We have worked this far on this project. We will try to complete our full project at final submission. We hope that this project will be really helpful at our medical sector.