BANGLADESH ARMY INTERNATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY (BAIUST), CUMILLA.

PROJECT ON MEDICAL COLLEGE

Department of Computer Science & Engineering (CSE)

Course Title   :   Database Management Sessional

Course Code   :   CSE – 302

Topic   :   Medical College & Hospital

Submission Data   :   09 Aug, 2022.

	Marking

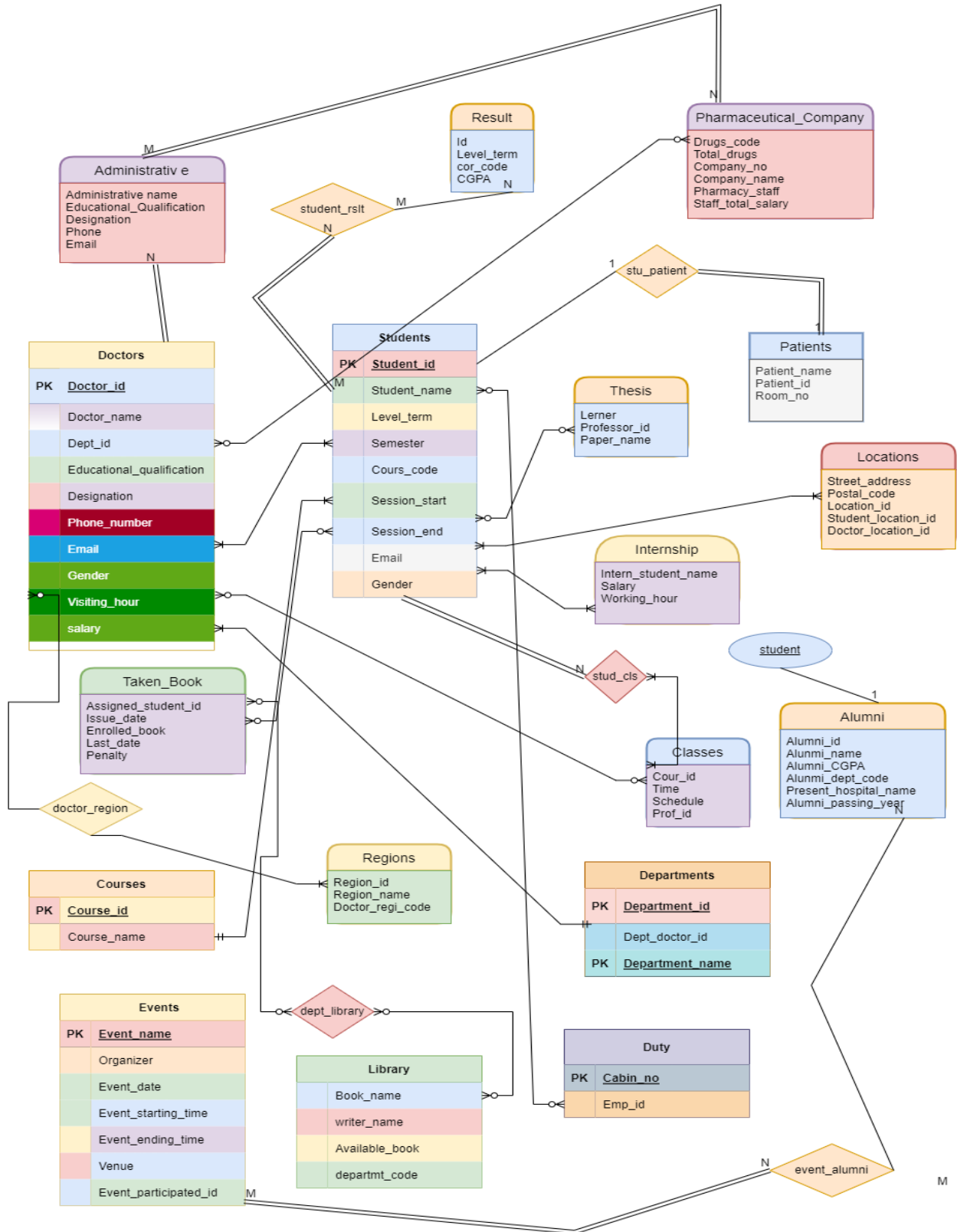| Submitted to_	Submitted by_
Name : Mousumi Hasan Mukti Assistant Professor. Department of Computer Science & Engineering. (BAIUST).	Name : Sonia Akter ID : 1111064 Section : B Level : 03 Term : I Department of Computer Science & Engineering(CSE).

Sonia Akter

Signature of Student   Signature of Teacher

Bangladesh Army International University of Science & Technology (BAIUST), Cumilla.

ER-diagram:

Result
Id
Level_term
cor_code
CGPA

Pharmaceutical_Company
Drugs_code
Total_drugs
Company_no
Company_name
Pharmacy_staff
Staff_total_salary

Administrativ e
Administrative name
Educational_Qualification
Designation
Phone
Email

student_rslt

stu_patient

Students

PK	Student_id
	Student_name
	Level_term
	Semester
	Cours_code
	Session_start
	Session_end
	Email
	Gender

Thesis
Lerner
Professor_id
Paper_name

Patients
Patient_name
Patient_id
Room_no

Doctors

PK	Doctor_id
	Doctor_name
	Dept_id
	Educational_qualification
	Designation
	Phone_number
	Email
	Gender
	Visiting_hour
	salary

Locations
Street_address
Postal_code
Location_id
Student_location_id
Doctor_location_id

Internship
Intern_student_name
Salary
Working_hour

student

Taken_Book
Assigned_student_id
Issue_date
Enrolled_book
Last_date
Penalty

stud_cls

Classes
Cour_id
Time
Schedule
Prof_id

Alumni
Alumni_id
Alunmi_name
Alumni_CGPA
Alunmi_dept_code
Present_hospital_name
Alumni_passing_year

doctor_region

Regions
Region_id
Region_name
Doctor_regi_code

Courses

PK	Course_id
	Course_name

Departments

PK	Department_id
	Dept_doctor_id
PK	Department_name

Events

PK	Event_name
	Organizer
	Event_date
	Event_starting_time
	Event_ending_time
	Venue
	Event_participated_id

dept_library

Library
Book_name
writer_name
Available_book
departmt_code

Duty

PK	Cabin_no
	Emp_id

event_alumni

Normalization:

Example of 1st normal form:

Administrative table-

Administrative_name	Educational_qualification	Designation	Phone	Email
Professor Dr. Md. Tito Mia	FCPS	Principal	51674388	principal@dmc.gov.bd dmc_principal@yahoo.com
Professor Dr. Md. Shafiqul Alam Chowdhury	MS	Vice-Principal	++88763453	vice-principal@dmc.gov.bd drshamimk41@yahoo.com

Here, the administrative table is not in 1NF because of multi-valued email address. So,Firstlt, we convert it into first normal form then we will do rest of the work. So,

Convert into first Normal form-

Administrative_name	Educational_qualification	Designation	Phone	Email
Professor Dr. Md. Tito Mia	FCPS	Principal	51674388	principal@dmc.gov.bd
Professor Dr. Md. Tito Mia	FCPS	Principal	51674388	dmc_principal@yahoo.com
Professor Dr. Md. Shafiqul Alam Chowdhury	MS	Vice-Principal	++88763453	vice-principal@dmc.gov.bd
Professor Dr. Md. Shafiqul Alam Chowdhury	MS	Vice-Principal	++88763453	drshamimk41@yahoo.com

Now, there are no Second Normal Form and Third Normal Form.

Department Table-

Department_id	Department_name	Dept_doctor_id
2221	Anatomy	101,102,111
3331	Physiology	103,106,108
4441	Cardiac Surgery	104,105,109
5551	Medicine	107,113

In department table we use multi-valued dept_doctor_id. So it is also need to be convert into First Normal Form.Like,

Converted-

Department_id	Department_name	Dept_doctor_id
2221	Anatomy	101
2221	Anatomy	102
2221	Anatomy	111
3331	Physiology	103
3331	Physiology	106
3331	Physiology	108
4441	Cardiac Surgery	104
4441	Cardiac Surgery	105
4441	Cardiac Surgery	109
4441	Cardiac Surgery	112
5551	Medicine	107
5551	Medicine	113

Events table:

Even_name	Organizer	Event_date	Event_Starting_time	Event_ending_time	Venue	Event_Participant_id
Website Lunching Ceremony, Card Day	Incepta pharmaceuticals limited	26-7-2015	10.00	11.30	DMC Principal Meeting Room	111102
Website Lunching Ceremony , DMC Day , Card Day	Incepta pharmaceuticals limited	26-7-2015	10.00	11.30	DMC Principal Meeting Room	111107
Website Lunching Ceremony , DMC Day	Incepta pharmaceuticals limited	26-7-2015	10.00	11.30	DMC Principal Meeting Room	111108
DMC Day, Card Day	Incepta pharmaceuticals limited	01-07-2016	10.00	4.40	DMC Principal Meeting Room	1111016

Event table is not in Normal Form as we find event_name has a multi-valued name. So we need to be convert it into First Normal Form Firstly.

Convert like this:

Even_na me	Organizer	Event_d ate	Event_Starting_ time	Event_ending_ time	Venue	Event_Participa nt_id
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	111102
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	111107
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	111108
DMC Day	Incepta pharmaceuti cals limited	01-07-2016	10.00	4.40	DMC Princip al Meeti ng Room	1111008
DMC Day	Incepta pharmaceuti cals limited	01-07-2016	10.00	4.40	DMC Princip al Meeti ng Room	1111016
DMC Day	Incepta pharmaceuti cals limited	01-07-2016	10.00	4.40	DMC Princip al Meeti ng Room	1111007

Duty Table:

Emp_id	Cabin_No

1111001,1111017	20
1111002,1111020	21
1111004,1111022	22
1111007,1111023	23
1111008,1111024	24
1111010,1111027	25
1111011,1111030	26
1111012,1111033	27
1111015,1111037	28

Here is another table we will use thai is also not in normal form. Because emp_id has multi-valued student id. So, convert it into First Normal Form we get:

Emp_id	Cabin_No
1111001	20
1111002	21
1111004	22
1111007	23
1111008	24
1111010	25
1111011	26
1111012	27
1111015	28

Example of 2nd normal form:

Now here also a table which are not in second normal form. Here, doctor_id and course_code is composite key. Because here, salary depend on course_code and course_code depends on doctor_id. That is these two are prime attribute and these are partially depended.

Doctors Table:

Doctor_id	Doctor_name	Dept_id	Educational_qualification	Designation	Salary	Course_id	Course_name
101	Dr.Sengupta kiswara	2221	M.Phil	Professor	103000	2221	Anatomy
102	Dr.Shakil Shams	2221	M.Phil	Associate Professor	103000	3331	Physiology
103	Dr.Dilruba Begum	3331	M.Phil	Professor	102000	4441	Cardiac Surgery
104	Dr.Nahid Yaemin	4441	M.O	Professor	103000	5551	Medicine
105	Dr.Pourobi Mollik	4441	MBBS	Lecturer	90000	6661	Neurology
106	Dr.Konika Das	3331	MBBS	Lecturer	103000	7771	Plastic Surgery

108	Dr.Tahmina Akter	3331	M.O	Associate Professor	80000	2221	Anatomy
109	Dr.Shimanto Al Ahsan	4441	M.O	Associate Professor	60000	3331	Physiology
110	Dr.Urmy Saha	7771	FCPS	Professor & Head of Department	105000	4441	Cardiac Surgery
111	Dr.Rashada Akter	2221	MBBS	Assistant Professor	500000	5551	Medicine
112	Dr.Mousumi Afroj	4441	M.Phil	Professor	101000	6661	Neurology

Converted into second normal form: (like this)

Table-1

Doctor_id	Doctor_name	Dept_id	Educational_qualification	Designation	Phone_number
101	Dr.Sengupta kiswara	2221	M.Phil	Professor	01676438745
102	Dr.Shakil Shams	2221	M.Phil	Associate Professor	01876534865
103	Dr.Dilruba Begum	3331	M.Phil	Professor	01854378945
104	Dr.Nahid Yaemin	4441	M.O	Professor	01965438723
105	Dr.Pourobi Mollik	4441	MBBS	Lecturer	01656487634
106	Dr.Konika Das	3331	MBBS	Lecturer	01545673894
107	Dr.Odhir Kumar	5551	M.Phil	Assistant Professor	01374698765

Table-2

Course_id	Course_name
2221	Anatomy
3331	Physiology
4441	Cardiac Surgery
5551	Medicine
6661	Neurology
7771	Plastic Surgery

Example of 3rd normal form:

Students Table:

Student_id	Student_name	Level_Term	Semester	Cours_code	Street_Address	Postal_code	Location_id	St_id	D_id	Session Start	Session End	Email	Gender
1111001	Benjamin James	4-2	Spring	2221	Aalto Place	3500	1000	1111001	101	12-02-2016	12-02-2021	benjaminstudent@gmail.com	Female
1111002	Corine Alise	5-1	Spring	2221	Abaco Path	4500	2000	1111002	102	24-05-2014	24-05-2019	corinestudent@gmail.com	Female
1111004	Oscar Amaro	5-2	Summar	2221	Abana Path	2300	3000	1111004	103	24-12-2014	24-12-2019	oscarstudent@gmail.com	Male
1111007	Jackson William	3-1	Summar	3331	Abasco Court	2200	4000	1111007	104	10-08-2017	10-08-2022	jacksonstudent@gmail.com	Female
1111008	Allison Sue	3-2	Spring	3331	Abbeville Loop	2100	5000	1111008	105	20-05-2018	20-05-2023	allisonstudent@gmail.com	Male

Here,student_no → student_name

Student_no → postal_code (as unique)

Postal_code → student_street & location_id

Student_no → course_code

Candidate key – student_no.

For this relation in table, student_no → postal_code and spostal_code → street_address are true. So street_address is transitively dependent on student_no. It violates the third normal form. To convert it in third normal form, we will decompose the as:

Students(Student_id, Student_name, Level_Term, Semester, Cours_code, Session Start, Session End, Email, Gender).

Locations(Street_Address, Postal_code, Location_id, St_id,D_id).

Table-1

Student _id	Student_n ame	Level_T erm	Semes ter	Cours_c ode	Sessi on Start	Sessi on End	Email	Gend er
111100 1	Benjamin James	4-2	Spring	2221	12-02-2016	12-02-2021	benjaminstudent@g mail.com	Fema le
111100 2	Corine Alise	5-1	Spring	2221	24-05-2014	24-05-2019	corinestudent@gmail .com	Fema le
111100 4	Oscar Amaro	5-2	Summ ar	2221	24-12-2014	24-12-2019	oscarstudent@gmail. com	Male

Table-2

Street_Address	Postal_code	Location_id	St_id	D_id
Aalto Place	3500	1000	1111001	101
Abaco Path	4500	2000	1111002	102
Abana Path	2300	3000	1111004	103
Abasco Court	2200	4000	1111007	104

Then all the tables we use in this project are in first normal form, second normal form, third normal form and also boyce-codd normal form. So no need to do anything more here.

Then I create my final all the tables (given below) for using in my project which are normalized.

Tables

Administrative

Administrative_name	Educational_qualification	Designation	Phone	Email
Prof. Dr. Tito Mia	FCPS	Principal	51674388	principal@dmc.gov.bd
Prof. Dr. Tito Mia	FCPS	Principal	51674377	dmc_principal@yahoo.com
Prof. Dr. Md. Shafiqul Alam	MS	Vice-Principal	++88763453	vice-principal@dmc.gov.bd
Prof. Dr. Md. Shafiqul Alam	MS	Vice-Principal	++88763454	drshamimk41@yahoo.com

DOCTORS

Doctor_id	Doctor_name	Dept_id	Educational_qualification	Designation	Phone_number	Email	Gender	Visiting_hour	Salary
101	Dr.Sengupta kiswara	2221	M.Phil	Professor	01676438745	segupta.bd@gmail.com	Male	7Hour	103000
102	Dr.Shakil Shams	2221	M.Phil	Associate Professor	01876534865	shakil.bd@gmail.com	Male	5Hour	103000
103	Dr.Dilruba Begum	3331	M.Phil	Professor	01854378945	dilruba.bd@gmail.com	Female	6Hour	102000
104	Dr.Nahid Yaemin	4441	M.O	Professor	01965438723	nahid.bd@gmail.com	Male	7Hour	103000
105	Dr.Pourobi Mollik	4441	MBBS	Lecturer	01656487634	pourobi.bd@gmail.com	Female	6Hour	90000
106	Dr.Konika Das	3331	MBBS	Lecturer	01545673894	konika.bd@gmail.com	Female	6Hour	103000
107	Dr.Odhir Kumar	5551	M.Phil	Assistant Professor	01374698765	odhir.bd@gmail.com	Male	7Hour	60000
108	Dr.Shimanto Al Ahsan	4441	M.O	Associate Professor	01345267894	shimato.bd@gmail.com	Female	5Hour	80000

109	Dr.Tahmina Akter	3331	M.O	Associate Professor	01787634345	tahmina.bd@gmail.com	Male	4Hour	60000
110	Dr.Urmy Saha	7771	FCPS	Professor & Head of Department	01987634387	urmy.bd@gmail.com	Male	7Hour	105000
111	Dr.Rashada Akter	2221	MBBS	Assistant Professor	01987632415	rashada.bd@gmail.com	Female	6Hour	500000
112	Dr.Mousumi Afroj	4441	M.Phil	Professor	09123463867	mousumi.bd@gmail.com	Female	6Hour	101000
113	Dr.Sanjida Akter Suma	5551	M.Phil	Professor and Head of Department	01765389623	sanjida.bd@gmail.com	Female	4Hour	75000
114	Dr.Tabassum Nehar	5551	MBBS	Assistane Professor	01654368732	tabassum.bd@gmail.com	Female	7Hour	450000
115	Dr.Kazi Giyas Uddin	6661	FCPS	Professor & Head of Department	01325648763	kazigiyas.bd@gmail.com	Male	6Hour	106000
116	Dr.Nazma Haque	7771	FCPS	Professor & Head of Department	01987345632	nazma1.bd@gmail.com	Female	5Hour	107000
117	Dr.Afrina	7771	FCPS	Professor	01987453324	afrina.bd@gmail.com	Female	5Hour	700000
118	Dr.Riyaj Mahmud	6661	M.D	Associate Professor	01789634254	riyaj.bd@gmail.com	Male	6Hour	400000

119	Dr.Imrul Saha	7771	M.O	Assistant Professor	01873648345	imrul.bd@gmail.com	Male	5Hour	300000

Departments

Department_id	Department_name	Dept_doctor_id
2221	Anatomy	101
2221	Anatomy	102
2221	Anatomy	111
3331	Physiology	103
3331	Physiology	106
3331	Physiology	108
4441	Cardiac Surgery	104
4441	Cardiac Surgery	105
4441	Cardiac Surgery	109
4441	Cardiac Surgery	112
5551	Medicine	107
5551	Medicine	113
5551	Medicine	114
6661	Neurology	115
6661	Neurology	118
7771	Plastic Surgery	110
7771	Plastic Surgery	116
7771	Plastic Surgery	117
7771	Plastic Surgery	119

Students

Student_id	Student_name	Level_Term	Semester	Cours_code	Session Start	Session End	Email	Gender
1111001	Benjamin James	4-2	Spring	2221	12-02-2016	12-02-2021	benjaminstudent@gmail.com	Female
1111002	Corine Alise	5-1	Spring	2221	24-05-2014	24-05-2019	corinestudent@gmail.com	Female
1111004	Oscar Amaro	5-2	Summar	2221	24-12-2014	24-12-2019	oscarstudent@gmail.com	Male

1111007	Jackson William	3-1	Summar	3331	10-08-2017	10-08-2022	jacksonstudent@gmail.com	Female
1111008	Allison Sue	3-2	Spring	3331	20-05-2018	20-05-2023	allisonstudent@gmail.com	Male
1111010	Kathryn Melissa	4-1	Spring	5551	20-02-2013	20-02-2018	kathrynstudent@gmail.com	Male
1111011	Philip John	2-1	Spring	5551	20-09-2018	20-09-2023	philipstudent@gmail.com	Female
1111012	Bianca Magali	2-1	Spring	4441	20-09-2018	20-09-2023	biancastudent@gmail.com	Male
1111015	Benjamin Eli	2-2	Summar	6661	06-04-2019	06-04-2024	elistudent@gmail.com	Female
1111016	Emma Elizabeth	1-1	Spring	4441	02-09-2020	02-09-2025	emmastudent@gmail.com	Female
1111017	Lewis Yoder	1-1	Spring	6661	02-09-2020	02-09-2025	lewisstudent@gmail.com	Male
1111020	Alisha Dawn	1-2	Summar	6661	05-04-2019	05-04-2024	alishastudent@gmail.com	Male
1111022	Dana Michelle	5-2	Summar	7771	24-12-2014	24-12-2019	danastudent@gmail.com	Male
1111023	Barrett William	3-1	Summar	6661	10-08-2017	10-08-2022	barretstudent@gmail.com	Female
1111024	Emily Ann	3-2	Spring	7771	20-05-2018	20-05-2023	emilystudent@gmail.com	Female
1111027	Kathryn Ellen	2-2	Summar	7771	06-04-2019	06-04-2024	ellenstudent@gmail.com	Female
1111030	Emma Lynn	2-1	Spring	5551	20-09-2018	20-09-2023	lyannstudent@gmail.com	Male
1111033	Erica Rose	5-1	Spring	2221	24-05-2014	24-05-2019	rosestudent@gmail.com	Female

| 1111037 | Nicole Lea | 4-2 | Spring | 3331 | 12-02-2016 | 12-02-2021 | nicolestudent@gmail.com | Male |
| 1111038 | Nicholas Scott | 4-1 | Spring | 4441 | 20-02-2013 | 20-02-2018 | nicholasstudent@gmail.com | Male |

Courses

Course_id	Course_name
2221	Anatomy
3331	Physiology
4441	Cardiac Surgery
5551	Medicine
6661	Neurology
7771	Plastic Surgery

Regions

Region_id	Region_name
3500	Europe
4500	Americas
2300	Asia
2200	Middle East and Africa
2100	Americas
3700	Americas
3900	Middle East and Africa
2900	Asia
1200	Middle East and Africa
1100	Europe
2800	Americas
1300	Americas
1300	Europe
2400	Americas
2600	Europe
1600	Americas
2500	Middle East and Africa
1900	Middle East and Africa
4800	Middle East and Africa

Locations

Street_Address	Postal_code	Location_id	St_id	D_id
Aalto Place	3500	1000	1111001	101

Abaco Path	4500	2000	1111002	102
Abana Path	2300	3000	1111004	103
Abasco Court	2200	4000	1111007	104
Abbeville Loop	2100	5000	1111008	105
Abbey Way	3700	6000	1111011	107
Abel Place	3900	7000	1111012	108
Abercorn Court	2900	8000	1111015	109
Abner Street	1200	9000	1111017	110
Acosta Court	1100	1001	1111020	111
Adams Lane	2800	1002	1111022	112
Addison Avenue	1300	2002	1111023	113
Adriana Way	2400	2003	1111024	114
Afton Avenue	4600	3003	1111030	115
Afton Avenue	4800	5000	1111033	116
Adriana Way	1900	6000	1111037	118
Addison Avenue	2500	7000	1111038	119

Results

Id	Level_Term	CGPA
1111001	4-2	3.35
1111002	5-1	3.98
1111004	5-2	3.76
1111007	3-1	3.85
1111008	3-2	3.56
1111010	4-1	3.87
1111011	2-1	3.65
1111012	2-1	4
1111015	2-2	3.22
1111016	1-1	3.98
1111017	1-1	2.98
1111022	5-2	3.99
1111023	3-1	3.45
1111024	3-2	3.33
1111027	3-2	3.22
1111030	1-2	3.22
1111033	5-2	3.66
1111037	5-1	3.88
1111038	4-1	3.63

Classes

Cour_id	Time	Schedule	Prof_id
2221	7.30	04-JUL-17	101
2221	7.30	05-JUL-17	102

2221	7.30	06-JUL-17	103
3331	7.00	10-JUL-17	104
3331	8.00	11-JUL-17	105
3331	8.00	12-JUL-17	107
4441	9.30	13-JUL-17	108
4441	3.30	14-JUL-17	109
4441	11.00	15-JUL-17	110
4441	11.00	16-JUL-17	111
5551	2.30	01-JUL-17	112
5551	12.30	03-JUL-17	113
6661	2.00	08-JUL-17	114
6661	3.00	09-JUL-17	115
7771	3.00	18-JUL-17	118
7771	5.40	19-JUL-17	110
7771	5.40	23-JUL-17	116
7771	2.40	25-JUL-17	117
5551	7.00	28-JUL-17	119

Thesis

Lerner_id	Professor_id	Paper_name
1111010	105	Is medical research on animals ethical
1111024	104	Epidemics versus pandemics
1111037	102	Child health care
1111038	107	Medical humanitarian missions
1111001	108	Homoeopathic medicines - the placebo effect
1111004	104	Virus infections - causes and treatment
1111022	107	Vaccination - dangers versus benefits
1111002	104	Artificial tissues and organs
1111033	102	Rare genetic diseases
1111008	103	Brain injuries

Internship

Intern_Student_name	Salary	Working_Hour
Sabikon Nahar	60000	7 Hour
Oishi Liza	60000	7 Hour
Tanannam Islam	50000	6 Hour
Joty Islam	50000	6 Hour
Nahin Hasan	55000	6.5 Hour
Forhad Uddin	65000	6 Hour
Nuri Zerin	45000	4 Hour
Brinty Alam	45000	4 Hour

Fariha Alam	30000	3 Hour
Sonia Akter	40000	5 Hour
Tania Akter	45000	5 Hour
Md.Mamun	60000	6 Hour
Al Mahmud	56000	6 Hour
Ahosan Habib	50000	5 Hour
Umme Habiba	30000	3 Hour

Events

Even_na me	Organizer	Event_d ate	Event_Starting_ time	Event_ending_ time	Venue	Event_Participa nt_id
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	1111002
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	1111007
Website Lunching Ceremon y	Incepta pharmaceuti cals limited	26-7-2015	10.00	11.30	DMC Princip al Meeti ng Room	1111008
DMC Day	Incepta pharmaceuti cals limited	01-07-2016	10.00	4.40	DMC Princip al Meeti ng Room	1111008
DMC Day	Incepta pharmaceuti cals limited	01-07-2016	10.00	4.40	DMC Princip al Meeti ng Room	1111016
DMC Day	Incepta pharmaceuti cals lim'ited	01-07-2016	10.00	4.40	DMC Princip al Meeti	1111007

					ng Room	
DMC Day	Incepta pharmaceuticals limited	20-08-2016	10.00	4.40	DMC Principal Meeting Room	1111017
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111001
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111002
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111007
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111016
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111037
Card Day	Incepta pharmaceuticals limited	20-08-2016	10.00	3.40	DMC Principal Meeting Room	1111038

Duty

Emp_id	Cabin_No
1111001	20

1111002	21
1111004	22
1111007	23
1111008	24
1111010	25
1111011	26
1111012	27
1111015	28
1111016	29
1111017	20
1111020	21
1111022	22
1111023	23
1111024	24
1111027	25
1111030	26
1111033	27
1111037	28
1111038	29

Patient

Patient_Name	Patient_Id	Room_No
Lotfa Yesmin	600	20
Lotifa Ara	601	21
Mohammad Arafat	602	22
Md.AR Rahman	603	23
Nijum Islam	604	24
Suborna Alam	605	25
Fatema Alam	606	26
Moriyam Ara	607	27
Jahid Hasan	608	28
Habib	609	29

Pharmaceotical

Drugs_code	Total_drugs	Company_no	Company_name	Pharmacy_staff	total_salary
2221	275990	901	Squar Pharmaceutical	6506	1706875
3331	378949	901	Squar Pharmaceutical	7095	1567342
4441	564738	901	Squar Pharmaceutical	5694	1435637
5551	342563	901	Squar Pharmaceutical	8794	1243567

6661	234352	901	Squar Pharmaceutical	9804	12435673
7771	125342	901	Squar Pharmaceutical	9805	1324567
2221	234152	902	Incpta Pharmacetical	8795	1233443
3331	7634432	902	Incpta Pharmacetical	9804	1345267
4441	764232	902	Incpta Pharmacetical	7984	1654324
5551	222243516	902	Incpta Pharmacetical	9784	1787453
6661	542314	902	Incpta Pharmacetical	8976	1786543
7771	543263	902	Incpta Pharmacetical	8675	1887536
2221	452312	903	Bexim Pharmaceutical	8769	1345632
3331	524373	903	Bexim Pharmaceutical	9787	1785434
4441	624373	903	Bexim Pharmaceutical	9687	1876453
5551	652341	903	Bexim Pharmaceutical	8676	1456372
6661	452341	903	Bexim Pharmaceutical	7568	1764538
7771	564265	903	Bexim Pharmaceutical	9686	1874646
2221	564265	904	Opsonin Pharma Ltd	9687	1875327
3331	554265	904	Opsonin Pharma Ltd	8987	1988374
4441	854265	904	Opsonin Pharma Ltd	9987	1678374
5551	554265	904	Opsonin Pharma Ltd	6087	9876543
6661	934562	904	Opsonin Pharma Ltd	8988	1897645
7771	334562	904	Opsonin Pharma Ltd	5688	1637645
2221	764562	905	Renata Limited	9688	1237645
3331	764562	905	Renata Limited	5688	9837645
4441	864562	905	Renata Limited	7788	6537645
5551	434562	905	Renata Limited	8888	3437645
6661	494562	905	Renata Limited	4488	9937645
7771	784562	905	Renata Limited	2188	1937645

2221	894562	906	Healthcare Limited.	9253	7435629
3331	934562	906	Healthcare Limited.	6253	2535629
4441	932562	906	Healthcare Limited.	9373	4355629
5551	659562	906	Healthcare Limited.	6543	4357429
6661	659562	906	Healthcare Limited.	9763	9457429
7771	659562	906	Healthcare Limited.	9763	9457429

Alumni

Alumni_id	Alumni_name	Alunmi_CGPA	Alumni_Dept_Code	Present_Hospital_name	Alunmi_Passing_Year
222201	Sabikon Nahar	3.87	2221	Square Hospital.	2001
222202	Oishi Liza	3.87	2221	Sheikh Fazilatunnesa Mujib Memorial KPJ Specialized Hospital & Nursing College.	2001
222203	Tanannam Islam	3.67	2221	Popular Diagnostic Centre Ltd.	2001
222204	Joty Islam	3.76	2221	Labaid Hospitals.	2002
222205	Nahin Hasan	3.33	2221	Asgar Ali Hospital.	2003
222206	Forhad Uddin	3.89	2221	Ibn Sina Specialized Hospital.	2002
222207	Nuri Zerin	3.87	2221	United Hospital Limited.	2003
333301	Sabikon Nahar	3.89	3331	Harun Eye Foundation Hospital.	2001
333302	Oishi Liza	3.76	3331	Square Hospital.	2005
333303	Lotfa Yesmin	3.87	3331	Sheikh Fazilatunnesa Mujib Memorial KPJ Specialized Hospital & Nursing College.	2005
333304	Lotifa Ara	3.87	3331	Popular Diagnostic Centre Ltd.	2006

333305	Mohamma d Arafat	3.67	3331	Anwer Khan Modern Hospital Ltd, Dhaka	2007
333306	Md.AR Rahman	3.76	3331	Evercare Hospital Dhaka[3]	2002
333307	Nijum Islam	3.33	4441	Asgar Ali Hospital Gandaria, Dhaka[4]	2001
444401	Suborna Alam	3.89	4441	Aysha Memorial Specialised Hospital, Dhaka	2003
444402	Fatema Alam	3.87	4441	Bangabandhu Memorial Hospital (BBMH), Chittagong	2002
444403	Moriyam Ara	3.89	4441	Bangabandhu Sheikh Mujib Medical University	2003
444404	Jahid Hasan	3.76	4441	Bangladesh College of Nursing	2001
444405	Habib	3.87	4441	Bangladesh Eye Hospital Limited, Dhaka[5]	2003
444406	Lotfa Yesmin	3.87	5551	Bangladesh Medical College Hospital, Dhaka	2004
555501	Lotifa Ara	3.87	5551	Bangladesh Specialized Hospital	2005
555502	Mohamma d Arafat	3.67	5551	Bangladesh Spine & Orthopaedic General Hospital Ltd, Panthapath, Dhaka	2006
555503	Md.AR Rahman	3.76	5551	Anwer Khan Modern Hospital Ltd, Dhaka	2005
555504	Nijum Islam	3.33	6661	Evercare Hospital Dhaka[3]	2006
555505	Suborna Alam	3.89	6661	Asgar Ali Hospital Gandaria, Dhaka[4]	2005
555506	Fatema Alam	3.87	6661	Aysha Memorial Specialised Hospital, Dhaka	2006
666601	Moriyam Ara	3.89	6661	Bangabandhu Memorial Hospital (BBMH), Chittagong	2003
666602	Adams Lane	3.76	7771	Bangabandhu Sheikh Mujib Medical University	2002
666603	Addison Avenue	3.87	7771	Bangladesh College of Nursing	2005

666604	Adriana Way	3.87	7771	Bangladesh Eye Hospital Limited, Dhaka[5]	2006
666605	Afton Avenue	3.67	7771	Bangladesh Medical College Hospital, Dhaka	2005
666606	Afton Avenue	3.76	7771	Bangladesh Specialized Hospital	2002

Library

Book_name	Writer_name	Available_Book	Dept_lib_code
Atlas of Human Anatomy	Ythkui Aky	6	2221
Ross & Wilson Anatomy and Physiology in Health and Illness	Yustud Akaui	7	2221
Ross & Wilson Anatomy and Physiology in Health and Illness	Yustud Akaui	7	2221
Clinical Anatomy: Applied Anatomy for Students and Junior Doctors	Abul Kamal Asad	4	2221
Gray's Anatomy for Students, 4th Edition.	Asaduzzamn	3	2221
Ghai's Textbook of Practical Physiology	Monir Ahmed	8	3331
Ganongs Review of Medical Physiology	Ahemd Monir	9	3331
Samson Wrights Applied Physiology	Yousof Ahmed	4	3331
CC Chatterjee's Human Physiology	Farida parbin	6	3331
Perspectives in Cardiothoracic Surgery (Volume V)	Miyataf Ara	6	4441
Atlas of Robotic Cardiac Surgery	Ahammed Hafij	5	4441
Manual of Perioperative Care in Adult Cardiac Surgery	Noulen Kabir	5	4441
TSRA Clinical Scenarios in Cardiothoracic Surgery	Prava Islam	9	4441
The Man Who Mistook His Wife for a Hat and	Parbin Begum	9	5551

Other Clinical Tales (Paperback)			
Musicophilia: Tales of Music and the Brain	Muniara Alam	6	6661
Hallucinations	Uynas Kil	6	6661
Hallucinations	Uynas Kil	6	6661
The Mind's Eye (Hardcover)	Ayatrdat Akil	12	7771
The Real Beauty Bible	Md.Easin	22	7771
After the Cut	Arafat Islam	32	7771
Plastic Surgery of the Face	Rabbi Fazle	22	7771

Taken Book

Assigned_id	Issue_date	Enrolled_book	Last_date	Penalty
1111001	4/6/2017	The Man Who Mistook His Wife for a Hat and Other Clinical Tales (Paperback)	4/7/2017	0
1111002	4/6/2017	Musicophilia: Tales of Music and the Brain	5/7/2017	100
1111004	6/5/2017	Hallucinations	5/6/2017	0
1111007	2/5/2017	The Mind's Eye (Hardcover)	1/6/2017	200
1111008	4/6/2017	The Real Beauty Bible	29/6/2017	200
1111010	18/6/2017	After the Cut	29/6/2017	50
1111011	18/4/2017	After the Cut	29/5/2017	0
1111012	18/4/2017	CC Chatterjee Human Physiology	29/5/2017	100
1111015	1/4/2017	Perspectives in Cardiothoracic Surgery (Volume V)	29/5/2017	200
1111016	1/4/2017	Samson Wrights Applied Physiology	2/5/2017	0
1111007	1/4/2017	Samson Wrights Applied Physiology	2/5/2017	60

****

SQL PART(Query)

alter session set "_ORACLE_SCRIPT"=true;

 create user dbms64

  2 identified by 123;

User created.

SQL> grant dba to dbms64;

Grant succeeded.

SQL> conn dbms64/123@orcl;

Connected.

SQL> show user;

USER is "DBMS64"

<div align="center">1</div>

```
create table Administrative
 2 (
 3    Administrative_name    varchar2(40),
 4    Educational_qualification     varchar2(8),
 5    Designation    varchar2(20),
 6    Phone   number  constraint administrative_phone_uk unique,
 7    Email   varchar2(30) constraint administrative_email_uk unique
 8 );
Table created.
insert into administrative
 2  values('Professor Dr. Md. Tito Mia','FCPS','Principal',51674388,'principal@dmc.gov.bd');
insert into administrative
2  values('Professor Dr. Md. Tito
Mia','FCPS','Principal',51674377,'dmc_principal@yahoo.com');
 insert into administrative
```

```
2  values('Prof. Dr. Md. Shafiqul Alam ','FCPS','Vice

Principal',88763453,'vice_principal@dmc.gov.bd');

 insert into administrative

 2  values('Prof. Dr. Md. Shafiqul Alam ','FCPS','Vice

Principal',88763454,'drshamimk41@yahoo.com');



               --------------***********--------------
```

2

```
SQL> create table doctors
 2  (
 3          doctor_id  number constraint doctors_doctor_id_pk primary key,
 4          doctor_name varchar2(30),
 5          dept_id number,
 6          edicational_qualification varchar2(20),
 7          designation varchar2(25),
 8          phone_number number constraint doctors_phone_number_uk unique,
 9          email varchar2(30),
10           gender varchar2(10),
11           visiting_hour varchar2(10),
12           salary number
13  );

insert into doctors

 2  values(101,'Dr.Sengupta
kiswara',2221,'M.Phil','Professor',01676438745,'segupta.bd@gmail.com','Male','7Hour',1030
00);

SQL> insert into doctors

 2  values(102,'Dr.Shakil Shams',2221,'M.Phil','Associate
Professor',01876534865,'shakil.bd@gmail.com','Male','5Hour',103000);

SQL> insert into doctors
```

```
  2  values(103,'Dr.Dilruba
Begum',3331,'M.Phil','Professor',01854378945,'dilruba.bd@gmail.com','Female','6Hour',102
000);

SQL> insert into doctors

  2  values(104,'Dr.Nahid
Yaemin',4441,'M.O','Professor',0185437765,'nahid.bd@gmail.com','male','7Hour',103000);

SQL> insert into doctors

  2  values(105,'Dr.Pourobi
Mollik',4441,'MBBS','Lecturer',01864537765,'pourobi.bd@gmail.com','Female','6Hour',90000
);

SQL> insert into doctors

  2  values(106,'Dr.Konika
Das',3331,'MBBS','Lecturer',01964537765,'konika.bd@gmail.com','Female','6Hour',103000);

SQL> insert into doctors

  2  values(107,'Dr.Odhir Kumar',5551,'M.Phil','Assistant
Professor',01374698765,'odhir.bd@gmail.com','male','7Hour',60000);

SQL> insert into doctors

  2  values(108,'Dr.Shimanto Al Ahsan',4441,'M.O','Associate
Professor',01787634345,'shimato.bd@gmail.com','male','4Hour',80000);

 insert into doctors

  2  values(109,'Dr.Tahmina Akter',3331,'M.O','Associate
Professor',01345267894,'tahmina.bd@gmail.com','Female','5Hour',60000);

SQL> insert into doctors

  2  values(110,'Dr.Urmy Saha',7771,'FCPS','Professor and Head of
Department',01787621045,'urmy.bd@gmail.com','male','7Hour',105000);

SQL> insert into doctors
```

2   values(111,'Dr.Rashada Akter',2221,'MBBS','Assistant
Professor',01887621045,'rashada.bd@gmail.com','Female','6Hour',500000);

SQL> insert into doctors

2   values(112,'Dr.Mousumi
Afroj',4441,'M.Phil','Professor',01894621045,'mousumi.bd@gmail.com','Female','6Hour',101
000);

SQL> insert into doctors

2   values(113,'Dr.Sanjida Akter Suma',5551,'M.Phil','Head of
Department',01994621045,'sanjida.bd@gmail.com','Female','4Hour',75000);

SQL> insert into doctors

2   values(114,'Dr.Tabassum Nehar',5551,'MBBS','Assistane
Professor',01923141045,'tabassum.bd@gmail.com','Female','7Hour',450000);

SQL> insert into doctors

2   values(115,'Dr.Kazi Giyas Uddin',6661,'FCPS','Head of
Department',01927641045,'kazigiyas.bd@gmail.com','male','6Hour',106000);

SQL> insert into doctors

2   values(116,'Dr.Nazma Haque',7771,'FCPS','Head of
Department',01923211045,'nazma1.bd@gmail.com','male','5Hour',107000);

SQL> insert into doctors

2
values(117,'Dr.Afrina',7771,'FCPS','professor',01927121045,'afrina.bd@gmail.com','Female','
5Hour',700000);

SQL> insert into doctors

2   values(118,'Dr.Riyaj Mahmud',6661,'M.D','Associate
Professor',01727121045,'riyaj.bd@gmail.com','male','6Hour',400000);

SQL> insert into doctors

```
 2  values(119,'Dr.Imrul Saha',7771,'M.O','Associate
Professor',01797121045,'imrul.bd@gmail.com','male','5Hour',300000);


                  ------------------*********-------------------
```

3

```
create table departments

 2  (

 3          department_id number,

 4          department_name varchar2(20),

 5          dept_doctor_id number,

 6  constraint departments_dept_doctor_id_fk foreign key(dept_doctor_id)

 7  references doctors(doctor_id)

 8  );


SQL> insert into departments

 2  values(2221,'Anatomy',101);


SQL> insert into departments

 2  values(2221,'Anatomy',102);


SQL> insert into departments

 2  values(2221,'Anatomy',111);


SQL> insert into departments

 2  values(3331,'Physiology',103);


SQL> insert into departments

 2  values(3331,'Physiology',106);
```

```
SQL> insert into departments
  2  values(3331,'Physiology',108);


SQL> insert into departments
  2  values(4441,'Cardiac Surgery',104);


SQL> insert into departments
  2  values(4441,'Cardiac Surgery',105);


SQL> insert into departments
  2  values(4441,'Cardiac Surgery',109);


SQL> insert into departments
  2  values(4441,'Cardiac Surgery',112);


SQL> insert into departments
  2  values(5551,'Medicine',107);


SQL> insert into departments
  2  values(5551,'Medicine',113);


SQL> insert into departments
  2  values(5551,'Medicine',114);


SQL> insert into departments
  2  values(6661,'Neurology',115);


SQL> insert into departments
  2  values(6661,'Neurology',118);
```

```
SQL> insert into departments

  2  values(7771,'Plastic Surgery',110);


SQL> insert into departments

  2  values(7771,'Plastic Surgery',116);


SQL> insert into departments

  2  values(7771,'Plastic Surgery',117);


SQL> insert into departments

  2  values(7771,'Plastic Surgery',119);
                      _____***************_____
```

4

```
create table courses
  2  (
  3    course_id number constraint courses_course_id_pk primary key,
  4    course_name varchar2(25)
  5  );

SQL> insert into courses
  2  values(2221,'Anatomy');

SQL> insert into courses
  2  values(3331,'Physiology');

SQL> insert into courses
  2  values(4441,'Cardiac Surgery');

SQL> insert into courses
  2  values(5551,'Medicine');

SQL> insert into courses
  2  values(6661,'Neurology');
```

```
SQL> insert into courses
  2  values(7771,'Plastic Surgery');
```

-------------------***********-------------------

5

```
create table students
  2  (
  3    student_id number constraint students_student_id_pk primary key,
  4    student_name varchar2(30),
  5    level_term varchar2(25),
  6    semester varchar2(15),
  7    cours_code number,
  8  constraint students_cours_code_fk foreign key(cours_code)
  9  references courses(course_id),
 10  session_start varchar2(15),
 11  session_end varchar2(20),
 12  email varchar2(30) constraint students_email_uk unique,
 13  gender varchar2(8)
 14  );

Table created.

insert into students
  2  values(1111001,'Benjamin James','4-2','Spring',2221,'12-02-2016','12-02-
2021','benjaminstudent@gmail.com','Female');

 insert into students
  2  values(1111002,'Corine Alise','5-1','Spring',2221,'24-05-2014','24-05-
2019','corinestudent@gmail.com','Female');

SQL> insert into students
  2  values(1111004,'Oscar Amaro','5-2','Summar',2221,'24-12-2014','24-05-
2019','oscarstudent@gmail.com','male');

SQL> insert into students
  2  values(1111007,'Jackson William','3-1','Summar',3331,'24-12-2014','24-12-
2019','jacksonstudent@gmail.com','Female');
```

```
SQL> insert into students
  2  values(1111008,'Allison Sue','3-2','Spring',3331,'20-05-2018','20-05-
2023','allisonstudent@gmail.com','male');

SQL> insert into students
  2  values(1111010,'Kathryn Melissa','4-1','Spring',5551,'20-02-2013','20-02-
2018','kathrynstudent@gmail.com','male');

SQL> insert into students
  2  values(1111011,'Philip John','2-1','Spring',5551,'20-09-2018','20-09-
2023','philipstudent@gmail.com','Female');

SQL> insert into students
  2  values(1111012,'Bianca Magali','2-1','Spring',4441,'20-09-2018','20-09-
2023','biancastudent@gmail.com','male');

SQL> insert into students
  2  values(1111015,'Benjamin Eli','2-2','Summar',6661,'06-04-2019','06-04-
2024','elistudent@gmail.com','Female');

SQL> insert into students
  2  values(1111016,'Emma Elizabeth','1-1','Spring',4441,'02-09-2020','02-09-
2025','emmastudent@gmail.com','Female');

SQL> insert into students
  2  values(1111017,'Lewis Yoder ','1-1','Spring',6661,'02-09-2020','02-09-
2025','lewisstudent@gmail.com','male');

SQL> insert into students
  2  values(1111020,'Alisha Dawn','1-2','Summar',6661,'05-04-2019','05-04-
2024','alishastudent@gmail.com','Female');

SQL> insert into students
  2  values(1111022,'Dana Michelle','5-2','Summar',7771,'24-12-2014','24-12-
2019','danastudent@gmail.com','male');

SQL> insert into students
```

```
  2  values(1111023,'Barrett William','3-1','Summar',6661,'24-12-2014','24-12-
2019','barrettstudent@gmail.com','male');

SQL> insert into students
  2  values(1111024,'Emily Ann','3-2','Summar',7771,'20-05-2018','20-05-
2023','emilystudent@gmail.com','Female');

SQL> insert into students
  2  values(1111027,'Kathryn Ellen ','2-2','Summar',7771,'10-05-2018','20-06-
2023','ellenstudent@gmail.com','Female');

SQL> insert into students
  2  values(1111030,'Emma Lynn','2-1','Spring',5551,'10-05-2018','20-06-
2023','lyannstudent@gmail.com','male');

SQL> insert into students
  2  values(1111033,'Erica Rose','5-1','Spring',2221,'24-05-2014','24-05-
2019','rosestudent@gmail.com','Female');

SQL> insert into students
  2  values(1111037,'Nicole Lea','4-2','Spring',3331,'12-02-2016','24-05-
2022','nicolestudent@gmail.com','male');

SQL> insert into students
  2  values(1111038,'Nicholas Scott','4-1','Spring',4441,'20-02-2013','24-05-
2019','scottstudent@gmail.com','male');

                 -----------------*******-----------------
```

6

```
create table classes
   (
   cour_id number,
   constraint classes_cour_id_fk foreign key(cour_id)
   references courses(course_id),
   time varchar2(10),
   schedule date default sysdate,
   prof_id number,
```

```
      constraint classes_prof_id_fk foreign key(prof_id)
      references doctors(doctor_id)
    );
Table created.

SQL> insert into classes
    values(2221,'7.30','4-jul-1017',101);

SQL> insert into classes
    values(2221,'7.30','5-jul-2017',102);

SQL> insert into classes
    values(2221,'7.30','6-jul-2017',103);

SQL> insert into classes
    values(3331,'7.00','10-jul-2017',104);

SQL> insert into classes
    values(3331,'8.00','11-jul-2017',105);

SQL> insert into classes
    values(3331,'8.00','12-jul-2017',107);

SQL> insert into classes
    values(4441,'9.30','13-jul-2017',108);

SQL> insert into classes
    values(4441,'3.30','14-jul-2017',109);

SQL> insert into classes
   values(4441,'11.00','15-jul-2017',110);

SQL> insert into classes
    values(4441,'11.00','16-jul-2017',111);

SQL> insert into classes
    values(5551,'2.30','1-jul-2017',112);
```

```
SQL> insert into classes
   values(5551,'12.30','03-jul-2017',113);

SQL> insert into classes
   values(6661,'2.00','08-jul-2017',114);

SQL> insert into classes
   values(6661,'3.00','09-jul-2017',115);

SQL> insert into classes
   values(7771,'3.00','18-jul-2017',118);

SQL> insert into classes
   values(7771,'5.40','19-jul-2017',110);

SQL> insert into classes
   values(7771,'5.40','23-jul-2017',116);

SQL> insert into classes
   values(7771,'2.40','25-jul-2017',117);

SQL> insert into classes
   values(5551,'7.00','28-jul-2017',119);
                    _____**********_____
```

7

```
create table internship
 2  (
 3  Intern_student_name varchar2(35),
 4  salary number constraint internship_salary_nn not null,
 5  working_hour varchar2(20)
 6  );

Table created.

SQL> insert into internship
 2  values('Sabikon Nahar',60000,'7 hour');

SQL> insert into internship
```

```
  2  values('Oishi Liza',60000,'7 hour');

SQL> insert into internship
  2  values('Tanannam Islam',50000,'6 hour');

SQL> insert into internship
  2  values('Joty Islam',50000,'6 hour');

SQL> insert into internship
  2  values('Nahin Hasan',55000,'6.5 hour');

SQL> insert into internship
  2  values('Forhad Uddin',65000,'6 hour');

SQL> insert into internship
  2  values('Nuri Zerin',45000,'4 hour');

SQL> insert into internship
  2  values('Brinty Alam',45000,'4 hour');

SQL> insert into internship
  2  values('Fariha Alam',30000,'3 hour');

SQL> insert into internship
  2  values('Sonia Akter',40000,'5 hour');

SQL> insert into internship
  2  values('Tania Akter',45000,'5 hour');

SQL> insert into internship
  2  values('Md.Mamun',60000,'6 hour');

SQL> insert into internship
  2  values('Al Mahmud',56000,'6 hour');

SQL> insert into internship
  2  values('Ahosan Habib',50000,'5 hour');

SQL> insert into internship
  2  values('Umme Habiba',30000,'3 hour');
```

---------------******---------------

8

```
create table thesis
  2  (
  3  lerner_id number,
  4  constraint thesis_lerner_id_fk foreign key(lerner_id)
  5  references students(student_id),
  6  professor_id number,
  7  constraint thesis_professor_id_fk foreign key(professor_id)
  8  references doctors(doctor_id),
  9  paper_name varchar2(45)
 10  );

Table created.

 insert into thesis
  2  values(1111024,104,'Epidemics versus pandemics');

SQL> insert into thesis
  2  values(1111037,102,'Child health care');

SQL> insert into thesis
  2  values(1111038,107,'Medical humanitarian missions');

SQL> insert into thesis
  2  values(1111001,108,'');

SQL> insert into thesis
  2  values(1111001,108,'Homoeopathic medicines - the placebo effect');

SQL> insert into thesis
  2  values(1111004,104,'Virus infections - causes and treatment');

SQL> insert into thesis
  2  values(1111010,105,'Is medical research on animals ethical');

SQL> insert into thesis
  2  values(1111022,107,'Vaccination - dangers versus benefits');

SQL> insert into thesis
  2  values(1111002,104,'Artificial tissues and organs');

SQL> insert into thesis
  2  values(1111033,102,'Rare genetic diseases');
```

```
SQL> insert into thesis
  2  values(1111008,103,'Brain injuries');


            ----------------************----------------
```

9

```
create table locations
  2  (
  3  street_address varchar2(20),
  4  postal_code number constraint locations_postal_code_uk unique,
  5  location_id number,
  6  st_id number,
  7  constraint locations_st_id_fk foreign key(st_id)
  8  references students(student_id),
  9  d_id number,
 10  constraint locations_d_id_fk foreign key(d_id)
 11  references doctors(doctor_id)
 12  );

Table created.
insert into locations
  2  values('Aalto Place',3500,1000,1111001,101);

 insert into locations
  2  values('Abaco Path',4500,2000,1111002,102);


SQL> insert into locations
  2  values('Abana Path',2300,3000,1111004,103);

SQL> insert into locations
  2  values('Abasco Court',2200,4000,1111007,104);


SQL> insert into locations
  2  values('Abbeville Loop',2100,5000,1111008,105);

SQL> insert into locations
  2  values('Abbey Way',3700,6000,1111011,107);
```

```
SQL> insert into locations
  2  values('Abel Place',3900,7000,1111012,108);


SQL> insert into locations
  2  values('Abercorn Court',2900,8000,1111015,109);

SQL> insert into locations
  2  values('Abner Street',1200,9000,1111017,110);


SQL> insert into locations
  2  values('Acosta Court',1100,1001,1111020,111);


SQL> insert into locations
  2  values('Adams Lane',2800,1002,1111022,112);


SQL> insert into locations
  2  values('Addison Avenue',1300,2002,1111023,113);


SQL> insert into locations
  2  values('Adriana Way',2400,2003,1111024,114);


SQL> insert into locations
  2  values('Afton Avenue',2600,3003,1111030,115);


SQL> insert into locations
  2  values('Afton Avenue',4800,5000,1111033,116);


SQL> insert into locations
  2  values('Adriana Way',1900,6000,1111037,118);


SQL> insert into locations
  2  values('Addison Avenue',2500,7000,1111038,119);
```

---------------------******---------------------

```
create table regions
 2  (
 3  region_id number,
 4  region_name varchar2(30)
 5  );

SQL> insert into regions
 2  values(3500,'Europe');

SQL> insert into regions
 2  values(4500,'Americas');

SQL> insert into regions
 2  values(2300,'Asia');

SQL> insert into regions
 2  values(2200,'Middle East and Africa');

SQL> insert into regions
 2  values(2100,'Americas');

SQL> insert into regions
 2  values(3700,'Americas');

SQL> insert into regions
 2  values(3900,'Middle East and Africa');

SQL> insert into regions
 2  values(2900,'Asia');

SQL> insert into regions
 2  values(1200,'Middle East and Africa');

SQL> insert into regions
 2  values(1100,'Europe');

SQL> insert into regions
 2  values(2800,'Americas');

SQL> insert into regions
 2  values(1300,'Americas');
```

```
SQL> insert into regions
  2  values(1300,'Europe');

SQL> insert into regions
  2  values(2400,'Americas');

SQL> insert into regions
  2  values(2600,'Europe');

SQL> insert into regions
  2  values(2500,'Middle East and Africa');

SQL> insert into regions
  2  values(1900,'Middle East and Africa');

SQL> insert into regions
  2  values(4800,'Middle East and Africa');

              --------------***********---------------
```

11

```
create table duty
  2  (
  3  emp_id number,
  4  constraint duty_emp_id_fk foreign key(emp_id)
  5  references students(student_id),
  6  cabin_no number
  7  );

Table created.
insert into duty
  2  values(1111001,20);

SQL> insert into duty
  2  values(1111002,21);

SQL> insert into duty
  2  values(1111004,22);

SQL> insert into duty
  2  values(1111007,23);

SQL> insert into duty
```

```
 2  values(1111008,24);


SQL> insert into duty
 2  values(1111010,25);

SQL> insert into duty
 2  values(1111011,26);

SQL> insert into duty
 2  values(1111012,27);

SQL> insert into duty
 2  values(1111015,28);

SQL> insert into duty
 2  values(1111016,29);

SQL> insert into duty
 2  values(1111017,20);

SQL> insert into duty
 2  values(1111020,21);

SQL> insert into duty
 2  values(1111022,22);

SQL> insert into duty
 2  values(1111023,23);

SQL> insert into duty
 2  values(1111024,24);

SQL> insert into duty
 2  values(1111027,25);

SQL> insert into duty
 2  values(1111030,26);

SQL> insert into duty
 2  values(1111033,27);

SQL> insert into duty
 2  values(1111037,28);
```

```
SQL> insert into duty
  2  values(1111038,29);
```

----------------***********----------------

12

```
create table patient
  2  (
  3     patient_name varchar2(30),
  4     patient_id number constraint patient_patient_id_pk primary key,
  5     room_no number constraint patient_room_no_uk unique
  6  );

Table created.
insert into patient
  2  values('Lotfa Yesmin',600,20);


SQL> insert into patient
  2  values('Lotifa Ara',601,21);


SQL> insert into patient
  2  values('Mohammad Arafat',602,22);


SQL> insert into patient
  2  values('Md.AR Rahman',603,23);


SQL> insert into patient
  2  values('Nijum Islam',604,24);


SQL> insert into patient
  2  values('Suborna Alam',605,25);


SQL> insert into patient
  2  values('Fatema Alam',606,26);


SQL> insert into patient
```

```
 2  values('Moriyam Ara',607,27);

SQL> insert into patient
 2  values('Jahid Hasan',608,28);

SQL> insert into patient
 2  values('Habib',609,29);
```

-------------------**********--------------------

13

```
create table Pharmaceotical
 2  (
 3  drugs_code number,
 4  constraint pharmaceotical_drugs_code_fk foreign key(drugs_code)
 5  references courses(course_id),
 6  total_drugs number,
 7  company_no number,
 8  company_name varchar2(20),
 9  pharmacy_staff number,
10  total_salary number
11  );

Table created.
insert into pharmaceotical
 2  values(2221,275990,901,'Squar Pharmaceutical',6506,1706875);

SQL> insert into pharmaceotical
 2  values(3331,378949,901,'Squar Pharmaceutical',7095,1567342);

SQL> insert into pharmaceotical
 2  values(4441,564738,901,'Squar Pharmaceutical',5694,1435637);

SQL> insert into pharmaceotical
 2  values(5551,342563,901,'Squar Pharmaceutical',8794,1243567);

SQL> insert into pharmaceotical
 2  values(6661,234352,901,'Squar Pharmaceutical',9804,12435673);

SQL> insert into pharmaceotical
 2  values(7771,125342,901,'Squar Pharmaceutical',9805,1324567);

SQL> insert into pharmaceotical
 2  values(2221,234152,902,'Incpta Pharmacetical',8795,1233443);
```

```
SQL> insert into pharmaceotical
  2  values(3331,7634432,902,'Incpta Pharmacetical',9804,1345267);

SQL> insert into pharmaceotical
  2  values(4441,764232,902,'Incpta Pharmacetical',7984,1654324);

SQL> insert into pharmaceotical
  2  values(5551,222243516,902,'Incpta Pharmacetical',9784,1787453);

SQL> insert into pharmaceotical
  2  values(6661,542314,902,'Incpta Pharmacetical',8976,1786543);

SQL> insert into pharmaceotical
  2  values(7771,543263,902,'Incpta Pharmacetical',8675,1887536);

SQL> insert into pharmaceotical
  2  values(2221,452312,903,'Bexim Pharmaceutical',8769,1345632);

SQL> insert into pharmaceotical
  2  values(3331,524373,903,'Bexim Pharmaceutical',9787,1785434);

SQL> insert into pharmaceotical
  2  values(4441,624373,903,'Bexim Pharmaceutical',9687,1876453);

SQL> insert into pharmaceotical
  2  values(5551,652341,903,'Bexim Pharmaceutical',8676,1456372);

SQL> insert into pharmaceotical
  2  values(6661,452341,903,'Bexim Pharmaceutical',7568,1764538);

SQL> insert into pharmaceotical
  2  values(7771,564265,903,'Bexim Pharmaceutical',9686,1874646);

SQL> insert into pharmaceotical
  2  values(2221,564265,904,'Opsonin Pharma Ltd',9687,1875327);

SQL> insert into pharmaceotical
  2  values(3331,554265,904,'Opsonin Pharma Ltd',8987,1988374);

SQL> insert into pharmaceotical
  2  values(4441,854265,904,'Opsonin Pharma Ltd',9987,1678374);

SQL> insert into pharmaceotical
```

```
  2  values(5551,554265,904,'Opsonin Pharma Ltd',6087,9876543);

SQL> insert into pharmaceotical
  2  values(6661,934562,904,'Opsonin Pharma Ltd',8988,1897645);

SQL> insert into pharmaceotical
  2  values(7771,334562,904,'Opsonin Pharma Ltd',5688,1637645);

SQL> insert into pharmaceotical
  2  values(2221,764562,905,'Renata Limited',9688,1237645);

SQL> insert into pharmaceotical
  2  values(3331,764562,905,'Renata Limited',5688,9837645);

SQL> insert into pharmaceotical
  2  values(4441,864562,905,'Renata Limited',7788,6537645);

SQL> insert into pharmaceotical
  2  values(5551,434562,905,'Renata Limited',8888,3437645);

SQL> insert into pharmaceotical
  2  values(6661,494562,905,'Renata Limited',4488,9937645);

SQL> insert into pharmaceotical
  2  values(7771,784562,905,'Renata Limited',2188,1937645);

SQL> insert into pharmaceotical
  2  values(2221,894562,906,'Healthcare Limited.',9253,7435629);

SQL> insert into pharmaceotical
  2  values(3331,934562,906,'Healthcare Limited.',6253,2535629);

SQL> insert into pharmaceotical
  2  values(4441,932562,906,'Healthcare Limited.',9373,4355629);

SQL> insert into pharmaceotical
  2  values(5551,659562,906,'Healthcare Limited.',6543,4357429);

SQL> insert into pharmaceotical
  2  values(6661,659562,906,'Healthcare Limited.',9763,9457429);

SQL> insert into pharmaceotical
  2  values(7771,659562,906,'Healthcare Limited.',9763,9457429);
```

-------------------********-------------------

14

```
create table results
 2 (
 3 id number constraint results_id_uk unique
 4 ,
 5 level_term varchar2(10),
 6 CGPA number
 7 );

 insert into results
 2 values(1111001,'4-2',3.35);

SQL> insert into results
 2 values(1111002,'5-1',3.98);

SQL> insert into results
 2 values(1111004,'5-2',3.76);

SQL> insert into results
 2 values(1111007,'3-1',3.85);

SQL> insert into results
 2 values(1111008,'3-2',3.56);

SQL> insert into results
 2 values(1111010,'4-1',3.87);

SQL> insert into results
 2 values(1111011,'2-1',3.65);

SQL> insert into results
 2 values(1111012,'2-1',4.00);

SQL> insert into results
 2 values(1111015,'2-2',3.22);

SQL> insert into results
 2 values(1111016,'1-1',3.98);

SQL> insert into results
 2 values(1111017,'1-1',2.98);
```

```
SQL> insert into results
  2  values(1111022,'5-2',3.99);

SQL> insert into results
  2  values(1111023,'3-1',3.45);

SQL> insert into results
  2  values(1111024,'3-2',3.33);

SQL> insert into results
  2  values(1111027,'3-2',3.22);

SQL> insert into results
  2  values(1111030,'1-2',3.22);

SQL> insert into results
  2  values(1111033,'5-2',3.66);

SQL> insert into results
  2  values(1111037,'5-1',3.88);

SQL> insert into results
  2  values(1111038,'4-1',3.63);
```

-------------------************------------------

15

```
create table
  2  taken_book
  3  (
  4  assigned_id number,
  5  constraint taken_book_assigned_id_fk foreign key(assigned_id)
  6  references students(student_id),
  7  issue_date varchar2(30),
  8  enrolled_book varchar2(100),
  9  last_date varchar2(30),
 10  penalty number
 11  );

Table created.

insert into taken_book
```

```
 2 values(1111001,'4/6/2017','The Man Who Mistook His Wife for a Hat and Other Clinical
Tales (Paperback)','4/7/2017',0);

SQL> insert into taken_book
 2 values(1111002,'4/6/2017','Musicophilia: Tales of Music and the Brain','5/7/2017',100);

SQL> insert into taken_book
 2 values(1111004,'6/5/2017','Hallucinations','5/6/2017',0);

SQL> insert into taken_book
 2 values(1111007,'2/5/2017','The Mind Eye (Hardcover)','1/6/2017',200);

SQL> insert into taken_book
 2 values(1111008,'4/6/2017','The Real Beauty Bible','29/6/2017',200);

SQL> insert into taken_book
 2 values(1111010,'18/6/2017','After the Cut','29/6/2017',50);

SQL> insert into taken_book
 2 values(1111011,'18/4/2017','After the Cut','29/5/2017',0);

SQL> insert into taken_book
 2 values(1111012,'18/4/2017','CC Chatterjee Human Physiology','29/5/2017',100);

SQL> insert into taken_book
 2 values(1111015,'1/4/2017','Perspectives in Cardiothoracic Surgery (Volume
V)','29/5/2017',200);

SQL> insert into taken_book
 2 values(1111016,'1/4/2017','Samson Wrights Applied Physiology','2/5/2017',0);

SQL> insert into taken_book
 2 values(1111017,'1/4/2017','Samson Wrights Applied Physiology','2/5/2017',60);
```

------------------************-------------------

16

```
create table library
 2 (
 3   book_name varchar2(100),
 4   writer_name varchar2(100),
 5   available_book number,
 6   dept_lib_code number,
 7 constraint library_dept_lib_code_fk foreign key(dept_lib_code)
```

```
 8  references courses(course_id)
 9  );
```

Table created.
 insert into library
 2 values('Atlas of Human Anatomy','Ythkui Aky',6,2221);

SQL> insert into library
 2 values('Ross and Wilson Anatomy and Physiology in Health and Illness','Yustud Akaui',7,2221);

SQL> insert into library
 2 values('Clinical Anatomy: Applied Anatomy for Students and Junior Doctors','Abul Kamal Asad',4,2221);

SQL> insert into library
 2 values('Gray Anatomy for Students, 4th Edition.','Asaduzzamn',3,2221);

SQL> insert into library
 2 values('Ghai Textbook of Practical Physiology','Monir Ahmed',8,3331);

SQL> insert into library
 2 values('Ganongs Review of Medical Physiology','Ahemd Monir',9,3331);

SQL> insert into library
 2 values('Samson Wrights Applied Physiology','Yousof Ahmed',4,3331);

SQL> insert into library
 2 values('CC Chatterjee Human Physiology','Farida parbin',6,3331);

SQL> insert into library
 2 values('Perspectives in Cardiothoracic Surgery (Volume V)','Miyataf Ara',6,4441);

SQL> insert into library
 2 values('Atlas of Robotic Cardiac Surgery','Ahammed Hafij',5,4441);

SQL> insert into library
 2 values('Manual of Perioperative Care in Adult Cardiac Surgery','Noulen Kabir',5,4441);

SQL> insert into library
 2 values('TSRA Clinical Scenarios in Cardiothoracic Surgery','Prava Islam',9,4441);

SQL> insert into library

```
  2  values('The Man Who Mistook His Wife for a Hat and Other Clinical Tales
(Paperback)','Parbin Begum',9,5551);

SQL> insert into library
  2  values('Musicophilia: Tales of Music and the Brain','Muniara Alam',6,6661);

SQL> insert into library
  2  values('Hallucinations','Uynas Kil',6,6661);

SQL> insert into library
  2  values('Hallucinations','Uynas Kil',6,6661);

SQL> insert into library
  2  values('The Minds Eye (Hardcover)','Ayatrdat Akil',12,7771);

SQL> insert into library
  2  values('The Real Beauty Bible','Md.Easin',22,7771);

SQL> insert into library
  2  values('After the Cut','Arafat Islam',32,7771);

SQL> insert into library
  2  values('Plastic Surgery of the Face','Rabbi Fazle',22,7771);

                  ----------------*********-----------------
```

17

```
create table alumni
  2  (
  3  alumni_id number constraint alumni_alumni_id_pk primary key,
  4  alumni_name varchar2(50),
  5  alumni_cgpa number,
  6  alumni_dept_code number,
  7  constraint alumni_alumni_dept_code_fk foreign key(alumni_dept_code)
  8  references courses(course_id),
  9  hospital_name varchar2(80),
 10  passing_year number
 11  );

Table created.

SQL> insert into alumni
  2  values(222201,'Sabikon Nahar',3.87,2221,'Square Hospital.',2001);
```

```
SQL> insert into alumni
  2  values(222202,'Oishi Liza',3.87,2221,'Sheikh Fazilatunnesa Mujib Memorial KPJ
Specialized Hospital and Nursing College.',2001);

SQL> insert into alumni
  2  values(222203,'Tanannam Islam',3.67,2221,'Popular Diagnostic Centre Ltd.',2001);

SQL> insert into alumni
  2  values(222204,'Joty Islam',3.67,2221,'Popular Diagnostic Centre Ltd.',2001);

SQL> insert into alumni
  2  values(222205,'Nahin Hasan',3.67,2221,'Labaid Hospitals.',2002);

SQL> insert into alumni
  2  values(222206,'Forhad Uddin',3.97,2221,'Ibn Sina Specialized Hospital.',2002);

SQL> insert into alumni
  2  values(222207,'Nuri Zerin',3.97,2221,'United Hospital Limited.',2003);

SQL> insert into alumni
  2  values(333301,'Sabikon Nahar',4.00,3331,'Harun Eye Foundation Hospital.',2001);

SQL> insert into alumni
  2  values(333302,'Lotfa Yesmin',4.00,3331,'Square Hospital.',2005);

SQL> insert into alumni
  2  values(333303,'Oishi Liza',4.00,3331,'Sheikh Fazilatunnesa Mujib Memorial KPJ
Specialized Hospital & Nursing College.',2005);

SQL> insert into alumni
  2  values(333304,'Lotifa Ara',4.00,3331,'Popular Diagnostic Centre Ltd.',2006);

SQL> insert into alumni
  2  values(333305,'Mohammad Arafat',4.00,3331,'Anwer Khan Modern Hospital Ltd,
Dhaka',2007);

SQL> insert into alumni
  2  values(333306,'Md.AR Rahman',4.00,3331,'Evercare Hospital Dhaka[3]',2002);

SQL> insert into alumni
  2  values(444401,'Nijum Islam',3.97,4441,'Asgar Ali Hospital Gandaria, Dhaka[4]',2001);

SQL> insert into alumni
```

```
  2  values(444402,'Suborna Alam',3.97,4441,'Aysha Memorial Specialised Hospital,
Dhaka',2003);

SQL> insert into alumni
  2  values(444403,'Fatema Alam',3.97,4441,'Bangabandhu Memorial Hospital (BBMH),
Chittagong',2003);

SQL> insert into alumni
  2  values(444404,'Moriyam Ara',3.87,4441,'Bangabandhu Sheikh Mujib Medical
University',2003);

SQL> insert into alumni
  2  values(444405,'Jahid Hasan',3.87,4441,'Bangladesh College of Nursing',2003);

SQL> insert into alumni
  2  values(444407,'Habib',3.87,4441,'Bangladesh Eye Hospital Limited, Dhaka[5]',2003);

SQL> insert into alumni
  2  values(555501,'Lotfa Yesmin',3.87,5551,'Bangladesh Medical College Hospital,
Dhaka',2004);

SQL> insert into alumni
  2  values(555502,'Lotifa Ara',3.87,5551,'Bangladesh Specialized Hospital',2004);

SQL> insert into alumni
  2  values(555503,'Lotifiara Khan',3.87,5551,'Bangladesh Spine and Orthopaedic General
Hospital Ltd, Panthapath, Dhaka',2004);

SQL> insert into alumni
  2  values(555504,'Nazma lotifiara Khan',3.87,5551,'Anwer Khan Modern Hospital Ltd,
Dhaka',2004);

SQL> insert into alumni
  2  values(666601,'Nijum Islam',3.57,6661,'Evercare Hospital Dhaka',2000);

SQL> insert into alumni
  2  values(666602,'Nijum Dus',3.57,6661,'Asgar Ali Hospital Gandaria, Dhaka[4]',2000);

SQL> insert into alumni
  2  values(666603,'Nijum Dus',3.57,6661,'Aysha Memorial Specialised Hospital, Dhaka',2000);

SQL> insert into alumni
  2  values(666604,'Moriyam Ara',3.77,6661,'Bangabandhu Memorial Hospital (BBMH),
Chittagong',2000);
```

```
SQL> insert into alumni
  2  values(777701,'Moriyam Arafat',3.77,7771,'Bangabandhu Sheikh Mujib Medical
University',2000);

SQL> insert into alumni
  2  values(777702,'Addison Avenue',3.79,7771,'Bangladesh College of Nursing',2000);

SQL> insert into alumni
  2  values(777703,'Adriana Way',3.79,7771,'Bangladesh Eye Hospital Limited,
Dhaka[5]',2000);

SQL> insert into alumni
  2  values(777704,'Afton Avenue',3.79,7771,'Bangladesh Medical College Hospital,
Dhaka',2000);

SQL> insert into alumni
  2  values(777705,'Afton Avenue',3.54,7771,'Bangladesh Specialized Hospital',2000);

          ----------------------******************------------------------
```

18

```
create table events
  (
   event_name varchar2(50),
   organizer varchar2(50),
   event_date varchar2(10) constraint events_event_date_nn not null,
   event_starting_time number,
   event_ending_time number,
   venue varchar2(50) constraint events_venue_nn not null,
   event_participant_id number,
   constraint events_event_participant_id_fk foreign key(event_participant_id)
   references students(student_id)
);

Table created.

insert into events
  2  values('Website Lunching Ceremony','Incepta pharmaceuticals limited','26-7-
2015',10.00,11.30,'DMC Principal Meeting Room',1111002);

SQL> insert into events
   values('Website Lunching Ceremony','Incepta pharmaceuticals limited','26-7-
2015',10.00,11.30,'DMC Principal Meeting Room',1111007);
```

```
SQL> insert into events
    values('Website Lunching Ceremony','Incepta pharmaceuticals limited','26-7-
2015',10.00,11.30,'DMC Principal Meeting Room',1111008);

SQL> insert into events
    values('DMC Day','Incepta pharmaceuticals limited','01-07-2016',10.00,4.30,'DMC Principal
Meeting Room',1111008);

SQL> insert into events
    values('DMC Day','Incepta pharmaceuticals limited','01-07-2016',10.00,4.30,'DMC Principal
Meeting Room',1111016);

SQL> insert into events
    values('DMC Day','Incepta pharmaceuticals limited','01-07-2016',10.00,4.30,'DMC Principal
Meeting Room',1111007);

SQL> insert into events
    values('DMC Day','Incepta pharmaceuticals limited','01-07-2016',10.00,4.30,'DMC Principal
Meeting Room',1111017);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111001);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111002);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111007);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111016);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111037);

SQL> insert into events
    values('Card Day','Incepta pharmaceuticals limited','20-07-2016',10.00,4.40,'DMC Principal
Meeting Room',1111038);
```

---------------**********--------------
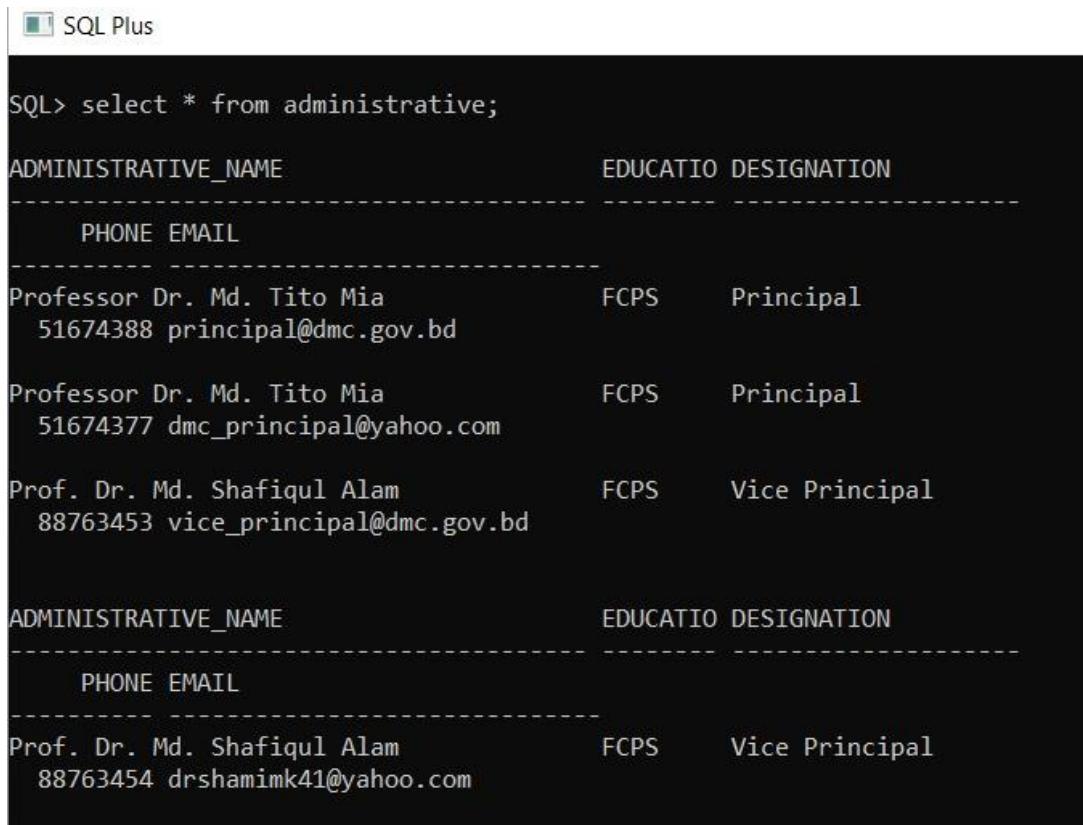
Examples of queries

1) **Find all the information of administrators.**

select * from administrative;

```
SQL Plus

SQL> select * from administrative;

ADMINISTRATIVE_NAME                         EDUCATIO DESIGNATION
------------------------------------------  -------- --------------------
     PHONE EMAIL
----------  ------------------------------
Professor Dr. Md. Tito Mia                   FCPS     Principal
  51674388 principal@dmc.gov.bd

Professor Dr. Md. Tito Mia                   FCPS     Principal
  51674377 dmc_principal@yahoo.com

Prof. Dr. Md. Shafiqul Alam                  FCPS     Vice Principal
  88763453 vice_principal@dmc.gov.bd


ADMINISTRATIVE_NAME                         EDUCATIO DESIGNATION
------------------------------------------  -------- --------------------
     PHONE EMAIL
----------  ------------------------------
Prof. Dr. Md. Shafiqul Alam                  FCPS     Vice Principal
  88763454 drshamimk41@yahoo.com
```

2) **Find doctor id and his salary and mail address using renaming with formal name.**

select doctor_id as id,salary,email as email_address
from doctors;

```
SQL> select doctor_id as id,salary,email as email_address
  2  from doctors;

        ID     SALARY EMAIL_ADDRESS
---------- ---------- ------------------------------
       101     103000 segupta.bd@gmail.com
       102     103000 shakil.bd@gmail.com
       103     102000 dilruba.bd@gmail.com
       104     103000 nahid.bd@gmail.com
       105      90000 pourobi.bd@gmail.com
       106     103000 konika.bd@gmail.com
       107      60000 odhir.bd@gmail.com
       108      80000 shimato.bd@gmail.com
       109      60000 tahmina.bd@gmail.com
       110     105000 urmy.bd@gmail.com
       111     500000 rashada.bd@gmail.com

        ID     SALARY EMAIL_ADDRESS
---------- ---------- ------------------------------
       112     101000 mousumi.bd@gmail.com
       113      75000 sanjida.bd@gmail.com
       114     450000 tabassum.bd@gmail.com
       115     106000 kazigiyas.bd@gmail.com
       116     107000 nazma1.bd@gmail.com
       117     700000 afrina.bd@gmail.com
       118     400000 riyaj.bd@gmail.com
       119     300000 imrul.bd@gmail.com

19 rows selected.
```

3) select intern_student_name as name, salary+1000 "Amount Salary"

   from internship;

```
SQL> select intern_student_name as name, salary+1000 "Amount Salary"
  2  from internship;

NAME                                 Amount Salary
------------------------------------ -------------
Sabikon Nahar                                61000
Oishi Liza                                   61000
Tanannam Islam                               51000
Joty Islam                                   51000
Nahin Hasan                                  56000
Forhad Uddin                                 66000
Nuri Zerin                                   46000
Brinty Alam                                  46000
Fariha Alam                                  31000
Sonia Akter                                  41000
Tania Akter                                  46000

NAME                                 Amount Salary
------------------------------------ -------------
Md.Mamun                                     61000
Al Mahmud                                    57000
Ahosan Habib                                 51000
Umme Habiba                                  31000

15 rows selected.
```
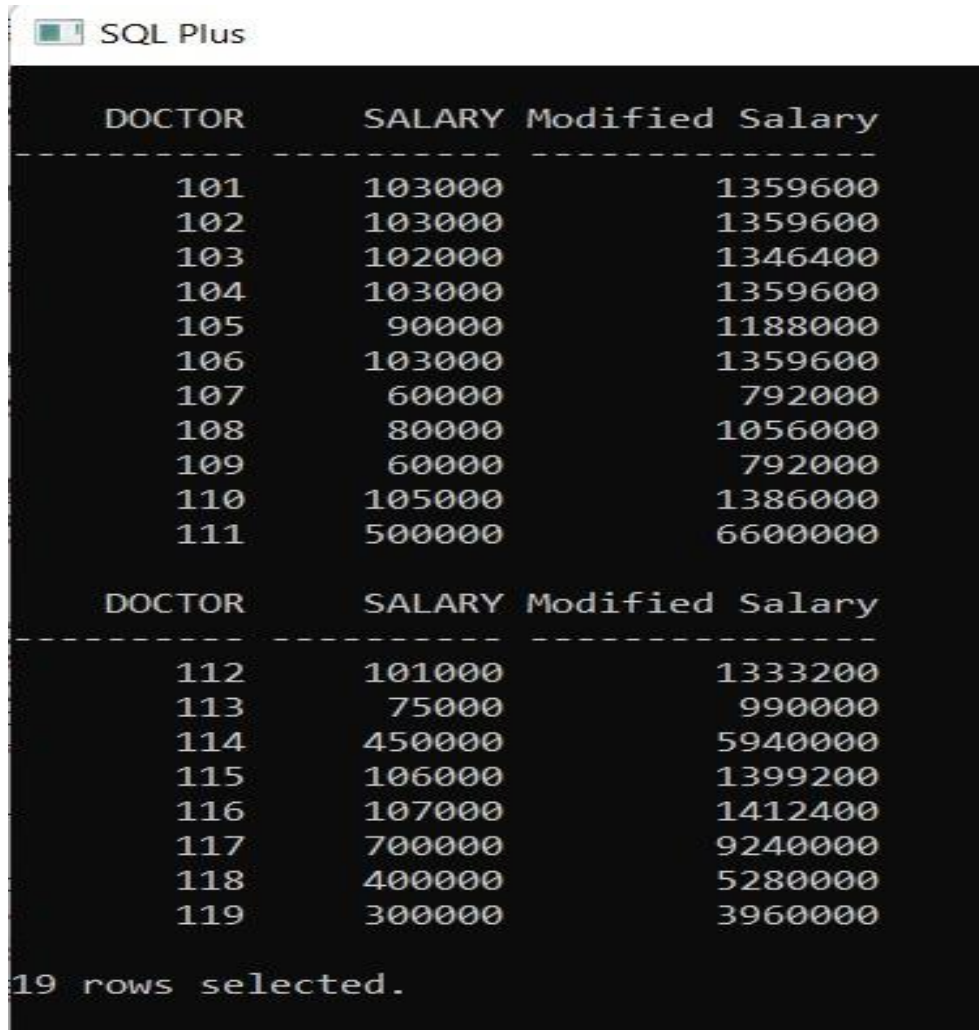
4) **Show the doctor id and salary using generalized projection method.**

select doctor_id as doctor,salary,((salary+(salary*10)/100)*12)
"Modified Salary"
from doctors;

```
SQL Plus

    DOCTOR       SALARY Modified Salary
 --------- ---------- ---------------
       101     103000         1359600
       102     103000         1359600
       103     102000         1346400
       104     103000         1359600
       105      90000         1188000
       106     103000         1359600
       107      60000          792000
       108      80000         1056000
       109      60000          792000
       110     105000         1386000
       111     500000         6600000

    DOCTOR       SALARY Modified Salary
 --------- ---------- ---------------
       112     101000         1333200
       113      75000          990000
       114     450000         5940000
       115     106000         1399200
       116     107000         1412400
       117     700000         9240000
       118     400000         5280000
       119     300000         3960000

19 rows selected.
```

5) **Concate doctor id and his department name.**

select dept_doctor_id||' then dept name of this id is: '||department_name
"Information of departments"
from departments;

```
Information of departments
--------------------------------------------------------------
101 then dept name of this id is: Anatomy
102 then dept name of this id is: Anatomy
111 then dept name of this id is: Anatomy
103 then dept name of this id is: Physiology
106 then dept name of this id is: Physiology
108 then dept name of this id is: Physiology
104 then dept name of this id is: Cardiac Surgery
105 then dept name of this id is: Cardiac Surgery
109 then dept name of this id is: Cardiac Surgery
112 then dept name of this id is: Cardiac Surgery
107 then dept name of this id is: Medicine

Information of departments
--------------------------------------------------------------
113 then dept name of this id is: Medicine
114 then dept name of this id is: Medicine
115 then dept name of this id is: Neurology
118 then dept name of this id is: Neurology
110 then dept name of this id is: Plastic Surgery
116 then dept name of this id is: Plastic Surgery
117 then dept name of this id is: Plastic Surgery
119 then dept name of this id is: Plastic Surgery

19 rows selected.
```

6) Find the date or schedule on which day course_code:4441 class will be held.

select time,schedule "Date of class"
  2 from classes
  3 where cour_id = 4441;

```
SQL> select time,schedule "Date of class"
  2  from classes
  3  where cour_id = 4441;

TIME          Date of class
----------    --------------------
9.30          13/7/2017
3.30          14/7/2017
11.00         15/7/2017
11.00         16/7/2017
```

7) Show the name and visiting hour of internship doctors whom salary is greater than 50000.

select intern_student_name as name,working_hour "Visiting Hour"
from internship
where salary > 50000;

```
SQL> select intern_student_name as name,working_hour "Visiting Hour"
  2  from internship
  3  where salary > 50000;

NAME                                    Visiting Hour
------------------------------------    --------------------
Sabikon Nahar                           7 hour
Oishi Liza                              7 hour
Nahin Hasan                             6.5 hour
Forhad Uddin                            6 hour
Md.Mamun                                6 hour
Al Mahmud                               6 hour

6 rows selected.
```

8) Find name of students whom emp_id are 1111007,1111008,1111017,1111037,11111038.

```
select student_name, level_term
from students join duty
on (student_id=emp_id)
where emp_id in(1111007,1111008,1111017,1111037,1111038);
```

```
SQL> select student_name, level_term
  2  from students join duty
  3  on (student_id=emp_id)
  4  where emp_id in(1111007,1111008,1111017,1111037,1111038);

STUDENT_NAME                    LEVEL_TERM
------------------------------- -------------------------
Jackson William                 3-1
Allison Sue                     3-2
Lewis Yoder                     1-1
Nicole Lea                      4-2
Nicholas Scott                  4-1
```

9) Show this kind of pharmaceotical company name their drugs code,total drugs,company no and salary of staff whose starting name is renata.

```
select company_name as name,drugs_code,total_drugs,company_no,total_salary as salary

from pharmaceotical

where company_name like 'Renata%';
```

```
SQL> select company_name as name,drugs_code,total_drugs,company_no,total_salary as salary
  2  from pharmaceotical
  3  where company_name like 'Renata%'
  4  ;

NAME                 DRUGS_CODE TOTAL_DRUGS COMPANY_NO     SALARY
-------------------- ---------- ----------- ---------- ----------
Renata Limited             2221      764562        905    1237645
Renata Limited             3331      764562        905    9837645
Renata Limited             4441      864562        905    6537645
Renata Limited             5551      434562        905    3437645
Renata Limited             6661      494562        905    9937645
Renata Limited             7771      784562        905    1937645

6 rows selected.
```

10) Find book names and students id in descending order whom take the books and also show their penalty if they have.

select enrolled_book "Book Name",assigned_id as id,penalty

 from taken_book

 order by 2 desc;

```
SQL> select enrolled_book "Book Name",assigned_id as id,penalty
  2  from taken_book
  3  order by 2 desc;

Book Name
----------------------------------------------------------------
        ID    PENALTY
---------- ----------
Samson Wrights Applied Physiology
   1111017         60

Samson Wrights Applied Physiology
   1111016          0

Perspectives in Cardiothoracic Surgery (Volume V)
   1111015        200


Book Name
----------------------------------------------------------------
        ID    PENALTY
---------- ----------
CC Chatterjee Human Physiology
   1111012        100

After the Cut
   1111011          0

After the Cut
   1111010         50


Book Name
----------------------------------------------------------------
        ID    PENALTY
---------- ----------
The Real Beauty Bible
   1111008        200

The Mind Eye (Hardcover)
   1111007        200

Hallucinations
   1111004          0
```

11) Fetch just 5 rows of book writer name and available book of the writer and course name.

select writer_name name,available_book book,course_name

from courses join library

on(course_id=dept_lib_code)

fetch first 5 rows only;

```
SQL> select writer_name name,available_book book,course_name
  2  from courses join library
  3  on(course_id=dept_lib_code)
  4  fetch first 5 rows only;

NAME
------------------------------------------------------------
       BOOK COURSE_NAME
---------- ------------------------
Ythkui Aky
         6 Anatomy

Yustud Akaui
         7 Anatomy

Yustud Akaui
         7 Anatomy

NAME
------------------------------------------------------------
       BOOK COURSE_NAME
---------- ------------------------
Abul Kamal Asad
         4 Anatomy

Asaduzzamn
         3 Anatomy
```

12) find 5th to 9th student id whom take book and it's issue date and last date.

select assigned_id,issue_date,last_date

from taken_book

offset 4 rows fetch next 5 rows only;

```
SQL> select assigned_id,issue_date,last_date
  2  from taken_book
  3  offset 4 rows fetch next 5 rows only;

ASSIGNED_ID ISSUE_DATE                        LAST_DATE
----------- -----------------------------    ------------------
    1111008 4/6/2017                          29/6/2017
    1111010 18/6/2017                         29/6/2017
    1111011 18/4/2017                         29/5/2017
    1111012 18/4/2017                         29/5/2017
    1111015 1/4/2017                          29/5/2017

SQL>
```

13) show n no company name and their total staff. (N is depend on user)

set verify off

SQL> select company_name,pharmacy_staff as staff

  2 from pharmaceotical

  3 where company_no=&company_no;

Enter value for company_no: 902

```
SQL>
SQL> set verify off
SQL>
SQL> select company_name,pharmacy_staff as staff
  2  from pharmaceotical
  3  where company_no=&company_no;
Enter value for company_no: 902

COMPANY_NAME                    STAFF
-------------------- ----------
Incpta Pharmacetical            8795
Incpta Pharmacetical            9804
Incpta Pharmacetical            7984
Incpta Pharmacetical            9784
Incpta Pharmacetical            8976
Incpta Pharmacetical            8675

6 rows selected.
```

14) How many drugs of medicine are available in Square Pharmaceuticals Limited company.

select total_drugs,company_name

2 from pharmaceotical join courses

3 on(drugs_code=course_id)

4 where company_name='Squar Pharmaceutical';

```
SQL> select total_drugs,company_name
  2  from pharmaceotical join courses
  3  on(drugs_code=course_id)
  4  where company_name='Squar Pharmaceutical';

TOTAL_DRUGS COMPANY_NAME
----------- --------------------
     275990 Squar Pharmaceutical
     378949 Squar Pharmaceutical
     564738 Squar Pharmaceutical
     342563 Squar Pharmaceutical
     234352 Squar Pharmaceutical
     125342 Squar Pharmaceutical

6 rows selected.
```

15) Find the names(Capital Letter) and id's of those students who are on duty with the 604 no patient.

select upper(student_name),student_id

2 from duty join students

3 on(emp_id=student_id)

4 join patient

5 on(cabin_no=room_no)

6 where patient_id=604;

```
SQL> select upper(student_name),student_id
  2  from duty join students
  3  on(emp_id=student_id)
  4  join patient
  5  on(cabin_no=room_no)
  6  where patient_id=604;

UPPER(STUDENT_NAME)               STUDENT_ID
------------------------------    ----------
ALLISON SUE                          1111008
EMILY ANN                            1111024

SQL>
```

16) convert schedule from classes table.

select schedule, to_char(schedule,'dd-mm-rrrr'),

 2 to_char(schedule,'dd-mm-rrrr hh:mi:ssAM')

 3 from classes;

```
SQL> select schedule, to_char(schedule,'dd-mm-rrrr'),
  2  to_char(schedule,'dd-mm-rrrr hh:mi:ssAM')
  3  from classes;

SCHEDULE   TO_CHAR(SC TO_CHAR(SCHEDULE,'DD-
---------  ---------- ---------------------
04-JUL-17  04-07-1017 04-07-1017 12:00:00AM
05-JUL-17  05-07-2017 05-07-2017 12:00:00AM
06-JUL-17  06-07-2017 06-07-2017 12:00:00AM
10-JUL-17  10-07-2017 10-07-2017 12:00:00AM
11-JUL-17  11-07-2017 11-07-2017 12:00:00AM
12-JUL-17  12-07-2017 12-07-2017 12:00:00AM
13-JUL-17  13-07-2017 13-07-2017 12:00:00AM
14-JUL-17  14-07-2017 14-07-2017 12:00:00AM
15-JUL-17  15-07-2017 15-07-2017 12:00:00AM
16-JUL-17  16-07-2017 16-07-2017 12:00:00AM
01-JUL-17  01-07-2017 01-07-2017 12:00:00AM

SCHEDULE   TO_CHAR(SC TO_CHAR(SCHEDULE,'DD-
---------  ---------- ---------------------
03-JUL-17  03-07-2017 03-07-2017 12:00:00AM
08-JUL-17  08-07-2017 08-07-2017 12:00:00AM
09-JUL-17  09-07-2017 09-07-2017 12:00:00AM
18-JUL-17  18-07-2017 18-07-2017 12:00:00AM
19-JUL-17  19-07-2017 19-07-2017 12:00:00AM
23-JUL-17  23-07-2017 23-07-2017 12:00:00AM
25-JUL-17  25-07-2017 25-07-2017 12:00:00AM
28-JUL-17  28-07-2017 28-07-2017 12:00:00AM

19 rows selected.
```

17) convert postal code in formal way.

select postal_code, to_char(postal_code,'9,999')

 2 from locations;

```
SQL> select postal_code, to_char(postal_code,'9,999')
  2  from locations;

POSTAL_CODE TO_CHA
----------- ------
       3500  3,500
       4500  4,500
       2300  2,300
       2200  2,200
       2100  2,100
       3700  3,700
       3900  3,900
       2900  2,900
       1200  1,200
       1100  1,100
       2800  2,800

POSTAL_CODE TO_CHA
----------- ------
       1300  1,300
       2400  2,400
       2600  2,600
       4800  4,800
       1900  1,900
       2500  2,500

17 rows selected.
```

18) Show course(dept) name, company no and their total staff salary.If the company is squar pharmaceotical then modify salary like total_salary-1000000 and if company is Incpta Pharmacetical then modify salary as total_salary-50000 and if company is Bexim Pharmaceutical then modify salary as total_salary-70000 then rest of the company's dept salary remain same.

SELECT course_name,company_no, total_salary,

  2 DECODE(company_name, 'Squar Pharmaceutical', total_salary-1000000,

  3 'Incpta Pharmacetical', total_salary-50000,

  4 'Bexim Pharmaceutical', total_salary-70000,

  5 total_salary)REVISED_SALARY

6 from courses join pharmaceotical

7 on(course_id=drugs_code);

```
SQL> SELECT course_name,company_no, total_salary,
  2  DECODE(company_name, 'Squar Pharmaceutical', total_salary-1000000,
  3  'Incpta Pharmacetical', total_salary-50000,
  4  'Bexim Pharmaceutical', total_salary-70000,
  5  total_salary)REVISED_SALARY
  6  from courses join pharmaceotical
  7  on(course_id=drugs_code);

COURSE_NAME                    COMPANY_NO TOTAL_SALARY REVISED_SALARY
------------------------------ ---------- ------------ --------------
Anatomy                               904      1875327        1875327
Anatomy                               901      1706875         706875
Anatomy                               906      7435629        7435629
Anatomy                               902      1233443        1183443
Anatomy                               903      1345632        1275632
Anatomy                               905      1237645        1237645
Physiology                            901      1567342         567342
Physiology                            905      9837645        9837645
Physiology                            906      2535629        2535629
Physiology                            903      1785434        1715434
Physiology                            902      1345267        1295267

COURSE_NAME                    COMPANY_NO TOTAL_SALARY REVISED_SALARY
------------------------------ ---------- ------------ --------------
Physiology                            904      1988374        1988374
Cardiac Surgery                       901      1435637         435637
Cardiac Surgery                       905      6537645        6537645
Cardiac Surgery                       903      1876453        1806453
Cardiac Surgery                       906      4355629        4355629
Cardiac Surgery                       904      1678374        1678374
Cardiac Surgery                       902      1654324        1604324
Medicine                              901      1243567         243567
Medicine                              904      9876543        9876543
Medicine                              903      1456372        1386372
Medicine                              902      1787453        1737453

COURSE_NAME                    COMPANY_NO TOTAL_SALARY REVISED_SALARY
------------------------------ ---------- ------------ --------------
Medicine                              906      4357429        4357429
Medicine                              905      3437645        3437645
Neurology                             905      9937645        9937645
Neurology                             904      1897645        1897645
Neurology                             903      1764538        1694538
Neurology                             902      1786543        1736543
Neurology                             901     12435673       11435673
```

19) Find total number of students using aggregation function.

select count(student_id)

 2 from students;

```
SQL> select count(student_id)
  2  from students;

COUNT(STUDENT_ID)
-----------------
               20
```

20) Find doctor name whose department code is 4441.

select distinct (doctor_id),doctor_name,department_id

 2 from departments join doctors

 3 on(department_id=dept_id)

 4 where department_id = 4441;

```
SQL> select distinct (doctor_id),doctor_name,department_id
  2  from departments join doctors
  3  on(department_id=dept_id)
  4  where department_id = 4441;

 DOCTOR_ID DOCTOR_NAME                          DEPARTMENT_ID
---------- ------------------------------------ -------------
       104 Dr.Nahid Yaemin                               4441
       108 Dr.Shimanto Al Ahsan                          4441
       105 Dr.Pourobi Mollik                             4441
       112 Dr.Mousumi Afroj                              4441
```

21) Find min salary,sum of salary and total number of doctors.

select sum(salary),count(doctor_id),min(salary)

from doctors

group by dept_id;

```
SQL> select sum(salary),count(doctor_id),min(salary)
  2  from doctors
  3  group by dept_id
  4  ;

SUM(SALARY) COUNT(DOCTOR_ID) MIN(SALARY)
---------- ---------------- -----------
    506000                2      106000
    706000                3      103000
    585000                3       60000
    374000                4       80000
   1212000                4      105000
    265000                3       60000

6 rows selected.
```

22) Find average salary of all doctors and show the result $1,23,000BDT format.

select avg(salary),to_char(avg(salary),'$9,99,999') BDT

from doctors;

```
SQL> select avg(salary),to_char(avg(salary),'$9,99,999') BDT
  2  from doctors;

AVG(SALARY) BDT
---------- ----------
    192000  $1,92,000
```

23) Find email,phone number,visiting hour of doctor whose last part of educational qualification is Phil and salary is greater than 60000 and also department is anatomy.(using sub query)

 select email,phone_number,visiting_hour

   from doctors

   where dept_id =3331

   and salary in(select salary

       from doctors

       where salary>60000

       and edicational_qualification like '%Phil');

```
SQL> select email,phone_number,visiting_hour
  2  from doctors
  3  where dept_id =3331
  4  and salary in(select salary
  5  from doctors
  6  where salary>60000
  7  and edicational_qualification like '%Phil');

EMAIL                             PHONE_NUMBER VISITING_H
--------------------------------- ------------ ----------
konika.bd@gmail.com                 1964537765 6Hour
dilruba.bd@gmail.com                1854378945 6Hour
```

24) Find student name,id and her department whose CGPA is more than others.

select student_name,student_id,course_name

 2 from students join results

 3 on(student_id=id)

 4 join courses

 5 on(cours_code=course_id)

 6 where cgpa=(select max(cgpa)

7 from results);

```
SQL> select student_name,student_id,course_name
  2  from students join results
  3  on(student_id=id)
  4  join courses
  5  on(cours_code=course_id)
  6  where cgpa=(select max(cgpa)
  7  from results);

STUDENT_NAME                      STUDENT_ID COURSE_NAME
------------------------------    ---------- --------------------------
Bianca Magali                        1111012 Cardiac Surgery

SQL> _
```

25) Create view where we see the details address of those doctors and students whose address actually in the same location.

 create view address_view_1

 2 as

 3 select region_name,d_id "Doctor Id",st_id "student id"

 4 from regions join locations

 5 on(region_id=postal_code);

```
SQL> create view address_view_1
  2  as
  3  select region_name,d_id "Doctor Id",st_id "student id"
  4  from regions join locations
  5  on(region_id=postal_code);

View created.

SQL> desc address_view_1;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 REGION_NAME                                        VARCHAR2(30)
 Doctor Id                                          NUMBER
 student id                                         NUMBER
```

```
SQL> select * from address_view_1;

REGION_NAME                    Doctor Id student id
------------------------------ ---------- ----------
Europe                                111    1111020
Middle East and Africa                110    1111017
Europe                                113    1111023
Americas                              113    1111023
Middle East and Africa                118    1111037
Americas                              105    1111008
Middle East and Africa                104    1111007
Asia                                  103    1111004
Americas                              114    1111024
Middle East and Africa                119    1111038
Europe                                115    1111030

REGION_NAME                    Doctor Id student id
------------------------------ ---------- ----------
Americas                              112    1111022
Asia                                  109    1111015
Europe                                101    1111001
Americas                              107    1111011
Middle East and Africa                108    1111012
Americas                              102    1111002
Middle East and Africa                116    1111033

18 rows selected.
```

26) Generate a view named class_time_view consisting of professor name with his id,class time.

```
 create view class_time_view
 2  as
 3  select prof_id,doctor_name,time "Class time"
 4  from classes join doctors
 5  on(prof_id=doctor_id);
```

```
SQL> desc class_time_view;
 Name                                     Null?     Type
 ---------------------------------------- --------  ----------------
 PROF_ID                                            NUMBER
 DOCTOR_NAME                                        VARCHAR2(30)
 Class time                                         VARCHAR2(10)

SQL> select * from class_time_view;

   PROF_ID DOCTOR_NAME                   Class time
---------- ---------------------------- ----------
       101 Dr.Sengupta kiswara          7.30
       102 Dr.Shakil Shams              7.30
       103 Dr.Dilruba Begum             7.30
       104 Dr.Nahid Yaemin              7.00
       105 Dr.Pourobi Mollik            8.00
       107 Dr.Odhir Kumar               8.00
       108 Dr.Shimanto Al Ahsan         9.30
       109 Dr.Tahmina Akter             3.30
       110 Dr.Urmy Saha                 11.00
       110 Dr.Urmy Saha                 5.40
       111 Dr.Rashada Akter             11.00

   PROF_ID DOCTOR_NAME                   Class time
---------- ---------------------------- ----------
       112 Dr.Mousumi Afroj             2.30
       113 Dr.Sanjida Akter Suma        12.30
       114 Dr.Tabassum Nehar            2.00
       115 Dr.Kazi Giyas Uddin          3.00
       116 Dr.Nazma Haque               5.40
       117 Dr.Afrina                    2.40
       118 Dr.Riyaj Mahmud              3.00
       119 Dr.Imrul Saha                7.00

19 rows selected.
```