

02 RIO DDL DML DQL DCL TCL HANDS ON EXERCISE-01

```
create table Trainer_Info(  
trainer_id varchar(20),  
Salutation varchar(7),  
Trainer_Name varchar(30),  
Trainer_Location varchar(30),  
Trainer_Track varchar(15),  
Trainer_Qualification varchar(100),  
Trainer_Experience int,  
Trainer_Email varchar(100),  
Trainer_Password varchar(20)  
);
```

```
create table Batch_Info(  
Batch_Id varchar(20),  
Batch_Owner varchar(30),  
Batch_BU_Name varchar(30)  
);
```

```
create table Module_Info(  
Module_Id varchar(20),  
Module_Name varchar(40),  
Module_Duration int  
);
```

```
create table Associate_Info(  
Associate_Id varchar(20),  
Salutation varchar(7),  
Associate_Name varchar(30),  
Associate_Location varchar(30),  
Associate_Track varchar(15),  
Associate_Qualification varchar(200),  
Associate_Email varchar(100),  
Associate_Password varchar(20)  
);
```

```
create table Questions(  
Question_Id varchar(20),  
Module_Id varchar(20),  
Question_Text varchar(900)  
);
```

```
create table Associate_Status(  
Associate_Id varchar(20),
```

```
Module_Id varchar(20),
Start_Date varchar(20),
End_Date varchar(20),
AFeedbackGiven varchar(20),
TFeedbackGiven varchar(20)
);
```

```
create table Trainer_Feedback(
Trainer_Id varchar(20),
Question_Id varchar(20),
Batch_Id varchar(20),
Module_Id varchar(20),
Trainer_Rating int
);
```

```
create table Associate_Feedback(
Associate_Id varchar(20),
Question_Id varchar(20),
Module_Id varchar(20),
Associate_Rating int
);
```

```
create table Login_Details(
User_Id varchar(20),
User_Password varchar(20)
);
```

```
alter table Associate_Status
add column Batch_Id varchar(20),
add column Trainer_Id varchar(20);
```

```
alter table Associate_Status
modify column Start_Date date,
modify column End_Date date;
```

```
insert into Trainer_Info values('F001','Mr.','PANKAJ GHOSH','Pune','Java','Bachelor of
Technology','12','Pankaj.Ghosh@alliance.com','fac1@123');
insert into Trainer_Info values('F002','Mr.','SANJAY
RADHAKRISHNAN','Bangalore','DotNet','Bachelor of
Technology','12','Sanjay.Radhakrishnan@alliance.com','fac2@123');
insert into Trainer_Info values('F003','Mr.','VIJAY
MATHUR','Chennai','Mainframe','Bachelor of
Technology','10','Vijay.Mathur@alliance.com','fac3@123');
insert into Trainer_Info values('F004','Mrs.','NANDINI NAIR','Kolkata','Java','Master of
Computer Applications','9','Nandini.Nair@alliance.com','fac4@123');
```

```
insert into Trainer_Info values('F005','Miss.','ANITHA  
PAREKH','Hyderabad','Testing','Master of Computer  
Applications','6','Anitha.Parekh@alliance.com','fac5@123');  
insert into Trainer_Info values('F006','Mr.','MANOJ  
AGRAWAL','Mumbai','Mainframe','Bachelor of  
Technology','9','Manoj.Agrawal@alliance.com','fac6@123');  
insert into Trainer_Info values('F007','Ms.','MEENA  
KULKARNI','Coimbatore','Testing','Bachelor of  
Technology','5','Meena.Kulkarni@alliance.com','fac7@123');  
insert into Trainer_Info values('F009','Mr.','SAGAR MENON','Mumbai','Java','Master of  
Science In Information Technology','12','Sagar.Menon@alliance.com','fac8@123');
```

```
insert into Batch_Info values('B001','MRS.SWATI ROY','MSP');  
insert into Batch_Info values('B002','MRS.ARURNA K','HEALTHCARE');  
insert into Batch_Info values('B003','MR.RAJESH KRISHNAN','LIFE SCIENCES');  
insert into Batch_Info values('B004','MR.SACHIN SHETTY','BFS');  
insert into Batch_Info values('B005','MR.RAMESH PATEL','COMMUNICATIONS');  
insert into Batch_Info values('B006','MRS.SUSAN CHERIAN','RETAIL &  
HOSPITALITY');  
insert into Batch_Info values('B007','MRS.SAMPADA JAIN','MSP');  
insert into Batch_Info values('B008','MRS.KAVITA REGE','BPO');  
insert into Batch_Info values('B009','MR.RAVI SEJPAL','MSP');
```

```
insert into Module_Info values('O10SQL','Oracle 10g SQL','16');  
insert into Module_Info values('O10PLSQL','Oracle 10g PL/SQL','16');  
insert into Module_Info values('J2SE','Core Java SE 1.6','288');  
insert into Module_Info values('J2EE','Advanced Java EE 1.6','80');  
insert into Module_Info values('JAVAFX','JavaFX 2.1','80');  
insert into Module_Info values('DOTNET4','.Net Framework 4.0','50');  
insert into Module_Info values('SQL2008','MS SQL Server 2008','120');  
insert into Module_Info values('MSBI08','MS BI Studio 2008','158');  
insert into Module_Info values('SHRPNT','MS Share Point','80');  
insert into Module_Info values('ANDRD4','Android 4.0','200');  
insert into Module_Info values('EM001','Instructor','0');  
insert into Module_Info values('EM002','Course Material','0');  
insert into Module_Info values('EM003','Learning Effectiveness','0');  
insert into Module_Info values('EM004','Environment','0');  
insert into Module_Info values('EM005','Job Impact','0');  
insert into Module_Info values('TM001','Attendees','0');  
insert into Module_Info values('TM002','Course Material','0');  
insert into Module_Info values('TM003','Environment','0');
```

```
insert into Associate_Info value('A001','Miss.','GAYATHRI  
NARAYANAN','Gurgaon','Java','Bachelor of  
Technology','Gayathri.Narayanan@hp.com','tne1@123');
```

```

insert into Associate_Info value('A002','Mrs.','RADHIKA
MOHAN','Kerala','Java','Bachelor of Engineering In Information
Technology','Radhika.Mohan@cognizant.com','tne2@123');
insert into Associate_Info value('A003','Mr.','KISHORE
SRINIVAS','Chennai','Java','Bachelor of Engineering In
Computers','Kishore.Srinivas@ibm.com','tne3@123');
insert into Associate_Info value('A004','Mr.','ANAND
RANGANATHAN','Mumbai','DotNet','Master of Computer
Applications','Anand.Ranganathan@finolex.com','tne4@123');
insert into Associate_Info value('A005','Miss.','LEELA
MENON','Kerala','Mainframe','Bachelor of Engineering In Information
Technology','Leela.Menon@microsoft.com','tne5@123');
insert into Associate_Info value('A006','Mrs.','ARTI KRISHNAN','Pune','Testing','Master
of Computer Applications','Arti.Krishnan@cognizant.com','tne6@123');
insert into Associate_Info value('A007','Mr.','PRABHAKAR
SHUNMUGHAM','Mumbai','Java','Bachelor of
Technology','Prabhakar.Shunmugham@honda.com','tne7@123');

```

```

insert into questions values('Q001','EM001','Instructor knowledgeable and able to
handle all your queries');
insert into questions values('Q002','EM001','All the topics in a particular course handled
by the trainer without any gaps or slippages');
insert into questions values('Q003','EM002','The course materials presentation,
handson, etc. referred during the training are relevant and useful. ');
insert into questions values('Q004','EM002','The Hands on session adequate enough to
grasp the understanding of the topic. ');
insert into questions values('Q005','EM002','The reference materials suggested for each
module are adequate. ');
insert into questions values('Q006','EM003','Knowledge and skills presented in this
training are applicable at your work');
insert into questions values('Q007','EM003','This training increases my proficiency
level');
insert into questions values('Q008','EM004','The physical environment e.g. classroom
space, air-conditioning was conducive to learning. ');
insert into questions values('Q009','EM004','The software/hardware environment
provided was sufficient for the purpose of the training. ');
insert into questions values('Q010','EM005','This training will improve your job
performance. ');
insert into questions values('Q011','EM005','This training align with the business
priorities and goals. ');
insert into questions values('Q012','TM001','Participants were receptive and had attitude
towards learning. ');
insert into questions values('Q013','TM001','All participats gained the knowledge and
the practical skills after this training. ');
insert into questions values('Q014','TM002','The course materials presentation,
handson, etc. available for the session covers the entire objectives of the course. ');

```

```
insert into questions values('Q015','TM002','Complexity of the course is adequate for
the particpate level.');
```

```
insert into questions values('Q016','TM002','Case study and practical demos helpful in
understanding of the topic');
```

```
insert into questions values('Q017','TM003','The physical environment e.g. classroom
space, air-conditioning was conducive to learning.');
```

```
insert into questions values('Q018','TM003','The software/hardware environment
provided was adequate for the purpose of the training.');
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A001','O10SQL','B001','F001',"2000-12-15","2000-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','O10SQL','B001','F001',"2000-12-15","2000-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A003','O10SQL','B001','F001',"2000-12-15","2000-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A001','O10PLSQL','B002','F002',"2001-2-1","2001-2-12");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','O10PLSQL','B002','F002',"2001-2-1","2001-2-12");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A003','O10PLSQL','B002','F002',"2001-2-1","2001-2-12");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A001','J2SE','B003','F003',"2002-8-20","2002-10-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','J2SE','B003','F003',"2002-8-20","2002-10-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A001','J2EE','B004','F004',"2005-12-1","2005-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','J2EE','B004','F004',"2005-12-1","2005-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A003','J2EE','B004','F004',"2005-12-1","2005-12-25");
```

```
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A004','J2EE','B004','F004',"2005-12-1","2005-12-25");
```

```

insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A005','JAVAFX','B005','F006',"2005-12-4","2005-12-20");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A006','JAVAFX','B005','F006',"2005-12-4","2005-12-20");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A006','SQL2008','B006','F007',"2007-6-21","2007-6-28");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A007','SQL2008','B006','F007',"2007-6-21","2007-6-28");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','MSBI08','B007','F006',"2009-6-26","2009-6-29");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A003','MSBI08','B007','F006',"2009-6-26","2009-6-29");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A004','MSBI08','B007','F006',"2009-6-26","2009-6-29");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A002','ANDRD4','B008','F005',"2010-6-5","2010-6-28");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A005','ANDRD4','B008','F005',"2010-6-5","2010-6-28");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A003','ANDRD4','B009','F005',"2011-8-1","2011-8-20");
insert into
Associate_Status(Associate_Id,Module_Id,Batch_Id,Trainer_Id,Start_Date,End_Date)
values('A006','ANDRD4','B009','F005',"2011-8-1","2011-8-20");

```

```

update Trainer_Info
set Trainer_Password = 'nn4@123'
where Trainer_Id = 'F004';

```

```

delete from associate_status
where Associate_Id = 'A003' and Module_Id=' J2EE';

```

```

SELECT * FROM trainer_info
ORDER BY Trainer_Experience DESC

```

LIMIT 5;

start transaction;

insert login_details values('U001','Admin1 @123'),('U002','Admin2 @123');

rollback;

drop table login_details;

02 RIO DDL DML DQL DCL TCL HANDS ON-02

```
create table Student_info(  
Registration_no varchar(30),  
Stu_Name varchar(40),  
Branch varchar(30),  
Contact double,  
Date_of_Birth date,  
Date_of_Joining date,  
Address varchar(200),  
Email_id varchar(100)  
);
```

```
create table Subject_Master(  
Subject_Code varchar(30),  
Subject_Name varchar(60),  
Wei_for_GPA int  
);
```

```
create table Student_marks(  
Reg_Number varchar(20),  
Subject_Code varchar(10),  
Semester int,  
marks int  
);
```

```
create table Student_Result(  
Reg_Number varchar(10),  
Semester int,  
GPA float,  
Is_Eligible char(3)  
);
```

```
insert into student_info values('MC101301','James','MCA',9714589787,'1984-01-  
12','2010-07-08','No 10,South Block,Nivea','james.mca@yahoo.com');  
insert into student_info values('BEC111402','Manio','ECE',8912457875,'1983-02-  
23','2011-06-25','8/12,Park View,Sieera','manioma@gmail.com');
```

```
insert into student_info values('BEEI1001204','Mike','EI',8974567897,'1983-02-10','2010-08-25','Cross villa,NY','mike.james@ymail.com');
insert into student_info values('MB111305','Paulson','MBA',8547986123,'1984-12-13','2010-08-08','Lake view,NJ','paul.son@rediffmail.com');
```

```
insert into Subject_Master values('EE01DCF',' DCF',' 30');
insert into Subject_Master values('EC02MUP',' Microprocessor',' 40');
insert into Subject_Master values('MC06DIP',' Digital Image Processing',' 30');
insert into Subject_Master values('MB03MAR',' Marketing Techniques',' 20');
insert into Subject_Master values('EI05IP',' Instrumentation Precision',' 40');
insert into Subject_Master values('CPSC02DS',' Data Structures',' 40');
```

```
insert into student_marks values('MC101301',' EE01DCF',' 1',' 75');
insert into student_marks values('MC101301',' EC02MUP',' 1',' 65');
insert into student_marks values('MC101301',' MC06DIP',' 1',' 70');
insert into student_marks values('BEC111402',' EE01DCF',' 1',' 55');
insert into student_marks values('BEC111402',' EC02MUP',' 1',' 80');
insert into student_marks values('BEC111402',' MC06DIP',' 1',' 60');
insert into student_marks values('BEEI101204',' EE01DCF',' 1',' 85');
insert into student_marks values('BEEI101204',' EC02MUP',' 1',' 78');
insert into student_marks values('BEEI101204',' MC06DIP',' 1',' 80');
insert into student_marks values('BEEI101204',' MB03MAR',' 2',' 75');
insert into student_marks values('BEEI101204',' EI05IP',' 2',' 65');
insert into student_marks values('BEEI101204',' CPSC02DS',' 2',' 75');
insert into student_marks values('MB111305',' EE01DCF',' 1',' 65');
insert into student_marks values('MB111305',' EC02MUP',' 1',' 68');
insert into student_marks values('MB111305',' MC06DIP',' 1',' 63');
insert into student_marks values('MB111305',' MB03MAR',' 2',' 85');
insert into student_marks values('MB111305',' EI05IP',' 2',' 74');
insert into student_marks values('MB111305',' CPSC02DS',' 2',' 62');
```

```
insert into student_result values('MC101301',' 1',' 7.5',' Y');
insert into student_result values('BEC111402',' 1',' 7.1',' Y');
insert into student_result values('BEEI101204',' 1',' 8.3',' Y');
insert into student_result values('BEEI101204',' 2',' 6.9',' N');
insert into student_result values('MB111305',' 1',' 6.5',' N');
insert into student_result values('MB111305',' 2',' 6.8',' N');
```

03 RIO CONSTRAINTS AND THEIR TYPES HANDS ON-01

```
create table trainer_info(
Trainer_Id varchar(30) not null primary key check(Trainer_Id like 'F%'),
```



```
Salutation varchar(7) not null,  
Trainer_Name varchar(30) not null,  
Trainer_Location varchar(30)not null,  
Trainer_Track varchar(15) not null,  
Trainer_Qualification varchar(100) not null,  
Trainer_Experience int,  
Trainer_Email varchar(100) not null,  
Trainer_Password varchar(20) not null  
);
```

```
create table Batch_Info(  
Batch_Id varchar(20)not null primary key check(Batch_Id like 'B%'),  
Batch_Owner varchar(30)not null,  
Batch_BU_Name varchar(30) not null  
);
```

```
create table Module_Info(  
Module_Id varchar(20)not null primary key check(upper(Module_Id)=Module_Id),  
Module_Name varchar(40)not null,  
Module_Duration int not null  
);
```

```
create table Associate_Info(  
Associate_Id varchar(20)not null primary key check(Associate_Id like 'A%'),  
Salutation varchar(7) not null,  
Associate_Name varchar(30)not null,  
Associate_Location varchar(30) not null,  
Associate_Track varchar(15) not null,  
Associate_Qualification varchar(200) not null,  
Associate_Email varchar(100) not null,  
Associate_Password varchar(20) not null  
);
```

```
create table Questions(  
Question_Id varchar(20)not null primary key check(Question_Id like 'Q%'),  
Module_Id varchar(20),  
foreign key (Module_Id) REFERENCES Module_Info(Module_Id),  
Question_Text varchar(900) not null  
);
```

```
create table Associate_Status(  
Associate_Id varchar(20) not null,  
foreign key (Associate_Id) REFERENCES Associate_Info(Associate_Id),  
Module_Id varchar(20) not null,  
foreign key (Module_Id) REFERENCES Module_Info(Module_Id),  
Batch_Id varchar(20)not null,
```

```
foreign key (Batch_Id) REFERENCES Batch_Info(Batch_Id),
Trainer_Id varchar(20)not null,
foreign key (Trainer_Id) REFERENCES Trainer_Info(Trainer_Id),
Start_Date varchar(20),
End_Date varchar(20),
AFeedbackGiven varchar(20),
TFeedbackGiven varchar(20)
);
```

```
create table Trainer_Feedback(
Trainer_Id varchar(20)not null,
foreign key(Trainer_Id) REFERENCES Trainer_Info(Trainer_Id),
Question_Id varchar(20)not null,
foreign key(Question_Id) REFERENCES Questions(Question_Id),
Batch_Id varchar(20)not null,
foreign key(Batch_Id) REFERENCES Batch_Info(Batch_Id),
Module_Id varchar(20)not null,
foreign key (Module_Id) REFERENCES Module_Info(Module_Id),
Trainer_Rating int not null
);
```

```
create table Associate_Feedback(
Associate_Id varchar(20)not null,
foreign key(Associate_Id) REFERENCES Associate_Info(Associate_Id),
Question_Id varchar(20)not null,
foreign key(Question_Id) REFERENCES Questions(Question_Id),
Module_Id varchar(20)not null,
foreign key(Module_Id) REFERENCES Module_Info(Module_Id),
Associate_Rating int not null
);
```

```
create table product(
product_Id int primary key,
productname varchar(20),
productprice int not null
);
```

```
create table user_1(
userID varchar(10) primary key,
product_Id int,
foreign key(product_Id) REFERENCES product(product_Id),
username varchar(20)
);
```

```
insert into product values(1,'A Dongle',290);
insert into product values(2,'B Dongle',1250);
insert into product(product_Id,productname) values(3,'C Dongle');
```

```
ALTER TABLE user_1
DROP FOREIGN KEY product_Id;
```

0 RIO CONSTRAINTS AND THEIR TYPES HANDS ON -02

```
create table Student_Info(
Reg_Number varchar(20) primary key,
Student_Name varchar(30) not null,
Branch varchar(30),
Contact_Number varchar(30),
Date_of_Birth varchar(15),
Date_of_joining datetime default current_timestamp
);
```

```
create table Subject_Master(
Subject_Code varchar(20) primary key,
Subject_Name varchar(20) not null,
Weightage int not null
);
```

```
create table Student_Marks(
Reg_Number varchar(20),
foreign key (Reg_Number) REFERENCES Student_Info(Reg_Number),
Subject_Code varchar(20),
foreign key (Subject_Code) REFERENCES Subject_Master(Subject_Code),
Semester int,
Marks int
);
```

```
create table Student_Result(
Reg_Number varchar(20),
foreign key (Reg_Number) REFERENCES Student_Info(Reg_Number),
Semester int,
GPA double,
Is_Eligible varchar(4) default 'yes'
);
```

```
alter table subject_master
modify Subject_Name varchar(20) not null unique;
```

```
alter table student_info  
modify Contact_Number varchar(30) unique;
```

```
alter table student_info  
ADD CHECK (Date_of_birth < current_timestamp);
```

```
alter table student_marks  
ADD CHECK (Marks<=100);
```

```
alter table student_result  
add check (GPA<=10);
```

```
alter table student_result  
add check (Is_Eligible='Y' or Is_Eligible='N');
```

04 RIO ANSI SQL OPERATOR HANDSON 01

```
Select * from trainer_info  
where Trainer_Email= null;
```

```
Select Trainer_Id,Trainer_Name,Trainer_Track,Trainer_location from trainer_info  
where Trainer_Experience >4;
```

```
SELECT * FROM module_info  
where Module_Duration>200;
```

```
Select Trainer_Id,Trainer_Name from trainer_info  
where Trainer_Qualification<>'Bachelor of Technology';
```

```
select * from module_info  
where Module_Duration between 200 and 300;
```

```
Select Trainer_Id,Trainer_Name from trainer_info  
where Trainer_Name like'M%';
```

```
Select Trainer_Id,Trainer_Name from trainer_info  
where Trainer_Name like'%O%';
```

```
select * from module_info  
where Module_Name <> null;
```

04 RIO ANSI SQL OPERATORS HANDS ON -02

```
SELECT * FROM student_info  
where Enail_id <> null;
```

```
select Reg_Number, marks from student_marks  
where marks>50;
```

```
select Reg_Number,GPA from student_result;
```

05 RIO ANSI SQL FUNCTIONS HANDS ON-01

```
select module_name, truncate(module_Infra_fees,2) from module_info;
```

```
UPDATE module_info  
SET module_Name = CONCAT(UCASE(LEFT(module_Name, 1)),  
LCASE(SUBSTRING(module_Name, 2)));
```

```
UPDATE module_info  
SET module_Id = CONCAT(UCASE(LEFT(module_Id, 1)),  
LCASE(SUBSTRING(module_Id, 2)));
```

```
select concat(module_name,module_id) from module_info;
```

```
Select upper(Module_Name) from module_info;
```

```
select substring(Module_name,1,3) from module_info;
```

```
SELECT AVG(ISNULL(base_fees,0)) FROM module_info;
```

```
select 100000+cast(Trainer_Id as decimal) from trainer_info;
```

```
select concat('The Base Fees Amount for the module  
name',module_info.Module_Name, cast(module_info.Base_Fees as decimal)) from  
module_info;
```

```
select count(*) from Module_Info;
```

```
select sum(base_fees) from Module_Fees;
```

```
select min(base_fees), max(base_fees) from Module_Fees;
```

05 RIO ANSI SQL FUNCTIONS HANDSON-02

```
select upper(Student_name) from student_info;  
select upper(Student_branch) from student_info;
```

```
select lower(Subject_Code) from subject_master;  
select lower(Subject_Name) from subject_master;  
select lower(Wei_for_GPA) from subject_master;
```

```
select concat('Age =', floor((current_date - Date_of_Birth)/4380)) from student_info;
```

```
select reg_number, student_name, avg(marks) from student_result;
```

```
select reg_number, student_name, max(marks) from student_result;
```

```
select reg_number, student_name, max(marks ) from student_marks  
where subject_name='EI05IP';
```

```
SELECT *, ISNULL(base_fees,0) FROM module_info;
```

06 RIO ANS SQLI CLAUSES HANDS ON -01

```
Select sum(No_of_associates), start_date from associate_info  
group by start_date;
```

```
Select sum(No_of_associates), start_date from associate_info  
where trainer_id='F001'  
group by start_date;
```

```
Select sum(No_of_associates), start_date from associate_info  
where trainer_id='F001'  
group by start_date  
having sum(No_of_associates)>2;
```

```
select * from module_info  
order by module_duration;
```

```
select associates_name, module_name, module_id, base_fees from module_info,  
associate_info, fees  
order by fees.base_fees desc;
```

06 RIO ANSI SQL CLAUSES HANDS ON -02

```
select student_name, registration_number,GPA from student_marks  
order by GPA desc;
```

```
select * from student_info  
order by Stu_Name asc;
```

```
select * from student_info  
order by Stu_Age asc;
```

```
select registration_number, student_name, semester_number,GPA from student_result  
order by GPA desc;
```

```
select registration_number, student_name, semester_number,GPA from student_result  
order by GPA desc;
```

```
select * from student_result  
group by Semester  
having max(GPA);
```

```
select * from student_result  
group by Semester  
having min(GPA);
```

07 ANS SQLI JOINS HANDS ON-01

```
select trainer_id,batch_id from trainer_info as ti cross join batch_info bi;
```

```
select * from associate_status as ass inner join batch_info as bi on bi.Batch_Id =  
ass.Batch_Id;
```

```
select ass.associate_id , ti.trainer_id from associate_status as ass  
right outer join trainer_info as ti on ass.trainer_Id = ti.trainer_id;
```

```
select ass.associate_id, ti.trainer_id from trainer_info as ti  
left outer join associate_status as ass on ass.Trainer_Id = ti.trainer_id;
```

```
alter table associate_status modify Trainer_Id varchar(20);
```

```
insert into associate_status(associate_id, module_id, batch_id) values('A007','EM004',  
'B001');
```

```

select ass.associate_id, ti.trainer_id from trainer_info as ti
left outer join associate_status as ass on ass.Trainer_Id = ti.trainer_id
union
select ass.associate_id, ti.trainer_id from trainer_info as ti
right outer join associate_status as ass on ass.Trainer_Id = ti.trainer_id;

delete from associate_status where Trainer_Id is null;
alter table associate_status modify Trainer_Id varchar(20) not null;

```

07 ANSI SQL JOINS HANDS ON-02

```

select student_name, subject_code, marks from student_marks as smarks
inner join student_info as sinfo on sinfo.reg_number = smarks.Reg_Number;

```

```

select student_name, subject_code, marks from student_marks as smarks
inner join student_info as sinfo on sinfo.reg_number = smarks.reg_number
where smarks.Reg_Number not in (select Reg_Number from student_marks where
marks<65) ;

```

```

select si.reg_number, student_name, gpa from student_info as si
inner join student_result as sr on sr.Reg_Number = si.reg_number
where gpa = (select max(gpa) from student_result);

```

```

Create table Backup_Student_Info(
Reg_Number Varchar(20) Primary Key ,
Student_Name Varchar(30) not null,
Branch Varchar(30),
Contact_Number Varchar(20),
Date_of_Birth Date not null,
Date_of_Joining Date Default(current_date),
Address Varchar(250),
Email_id Varchar(250),
foreign key (reg_number) references student_info(reg_number));

```

```

insert into student_info values('MC101305' , 'Jamie', 'BCA' , '9714589788', '1983-1-12',
'2011-7-08',
'No 7, South Block Nivea', 'jamie.bca@yahoo.com'),
('BEC111408' , 'Marie', 'ECE', '8912457888', '1983-2-27', '2011-8-25',
'8/12, manyata Park View, Sieera', 'marie@gmail.com');

```



```
select * from student_info as sinfo
left outer join backup_student_info as bup on bup.Reg_Number = sinfo.Reg_number;
```

```
select * from backup_student_info as bup
right outer join student_info as sinfo on sinfo.reg_number = bup.Reg_Number;
```

08 ANSI SQL SUBQUERIES HANDS ON-01

```
select distinct trainer_id from associate_status
where Associate_Id in (select Associate_Id from associate_info where Associate_Name
like '%i%');
```

```
select distinct trainer_id from associate_status
where Associate_Id in (select Associate_Id from associate_info where Associate_Name
not like '%i%');
```

```
select trainer_id, trainer_rating from trainer_feedback
where trainer_id in (select trainer_id from associate_status where module_Id = 'J2EE');
```

```
CREATE TABLE Trainer_Info_Sabbatical
(Trainer_Id VARCHAR(20) PRIMARY KEY,
Salutation VARCHAR(7) NOT NULL,
Trainer_Name VARCHAR(30) NOT NULL,
Trainer_Location VARCHAR(30) NOT NULL,
Trainer_Track VARCHAR(15) NOT NULL,
Trainer_Qualification VARCHAR(100) NOT NULL,
Trainer_Experience int ,
Trainer_Email VARCHAR(100) NOT NULL,
Trainer_Password VARCHAR(20) NOT NULL
);
```

```
insert into Trainer_Info_Sabbatical values
('F011','Mr.','Shyju K', 'Kochi','Java','Bachelor of
Technology',9,'shyju@alliance.com','fac11@123');
insert into Trainer_Info_Sabbatical values
('F012','Mr.','Raviraj Kumar', 'Kochi','Java','Bachelor of
Technology',8,'raviarajkumar@alliance.com','fac12@123');
insert into Trainer_Info_Sabbatical values
```

```
('F013','Mr.','Suresh Babu N', 'Mumbai','Testing','Bachelor of Technology',19,'sureshbabun@alliance.com','fac13@123');
```

```
insert into trainer_info select * from trainer_info_sabbatical;
```

```
update trainer_info set trainer_location = 'kochi'
where trainer_id in (select trainer_id from trainer_info_sabbatical where
Trainer_Experience >10);
```

```
delete from trainer_info where trainer_id
in (select trainer_id from trainer_info_sabbatical where Trainer_Experience > 12);
```

```
select * from trainer_info_sabbatical as t1 where t1.trainer_id in
(select trainer_id from trainer_info as t2 where t1.Trainer_Id = t2.trainer_id);
```

08 ANSI SQL SUBQUERIES HANDS ON-02

```
select si.student_name,marks, sm.Reg_Number, subject_code from student_marks as
sm
inner join student_info as si on si.reg_number = sm.Reg_Number
where sm.Reg_Number in (select reg_number from student_marks group by
subject_code having max(marks));
```

```
select si.reg_number , si.student_name, sm.marks from student_marks as sm
inner join student_info as si on si.reg_number = sm.reg_number
where sm.Reg_Number in (select reg_number from student_marks group by
subject_code having max(marks)) and
subject_code = 'EI05IP';
```

```
select student_name, reg_number from student_info
where reg_number = (select reg_number from student_marks where subject_code =
'EI05IP'
order by marks desc
limit 1 offset 1);
```

```
select reg_number from student_marks where marks >
(select avg(marks) from student_marks where subject_code = 'EI05IP');
```

09 ANSI SQL VIEW HANDS ON-01

```
create unique index index_2 on associate_info(associate_name);
```

```
alter table associate_info drop index index_2;
```

```
create view view_3 as select associate_id , trainer_id, batch_id  
from associate_status with cascaded check option;
```

```
select * from view_3;
```

```
create or replace view view_4 as select associate_id, trainer_id, batch_id  
from associate_status with local check option;
```

```
select * from view_4;
```

09 ANSI SQL VIEW HANDS ON-02

```
create view STUDENT_GPA_emp_id as  
select si.student_name, sr.reg_number, sr.semester, sr.GPA from student_result as sr  
join student_info as si on si.reg_number = sr.reg_number;
```

```
select * from STUDENT_GPA_emp_id where gpa>5;
```

```
create or replace view STUDENT_AVERAGE_GPA_emp_id as select si.student_name,  
sr.reg_number,  
avg(gpa) 'average_gpa' from student_result as sr  
join student_info as si on si.reg_number = sr.Reg_Number group by reg_number;
```

```
select * from student_average_gpa_emp_id;
```

```
SELECT * from student_average_gpa_emp_id where average_gpa>7;
```

```
create index index_1 on student_marks(semester);
```

```
alter table student_marks drop index index_1 ;
```

```
create unique index index_2 on student_info(Email_id);
```

