Exercise 1
create database handson

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),
primary key (trainer_id));

create table Batch_info(
batch_id varchar(20),
batch_owner varchar(30),
batch_BU_name varchar(30),
primary key (batch_id));

create table Module_info(
module_id varchar(20),
module_name varchar(40),
module_duration int,
primary key (module_id));

create table Assoiciate_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),
primary key (associate_id));

create table Questions(
question_id varchar(20),
module_id varchar(20),
question_text varchar(900),
primary key (question_id));

create table Assoiciate_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 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));
```

Exercise 2

```
INSERT
INTO
Trainer_Info(trainer_id,salutation,trainer_name,trainer_location,trainer_Track,trainer_qualification,
trainer_experience,trainer_email,trainer_password )
VALUES
('F001','Mr.','PANKAJ GHOSH','Pune','Java','Bachelor of
Technology','12','Pankaj.Ghosh@alliance.com','fac1@123'),
('F002','Mr.','SANJAY RADHAKRISHNAN','Bangalore','DotNet','Bachelor of
Technology','12','Sanjay.Radhakrishnan@alliance.com','fac2@123'),
('F003','Mr.','VIJAY MATHUR','Chennai','Mainframe','Bachelor of
Technology','10','Vijay.Mathur@alliance.com','fac3@123'),
('F004','Mrs.','NANDINI NAIR','Kolkata','Java','Master of Computer
Applications','9','Nandini.Nair@alliance.com','fac4@123'),
('F005','Miss.','ANITHA PAREKH','Hyderabad','Testing','Master of Computer
Applications','6','Anitha.Parekh@alliance.com','fac5@123'),
('F006','Mr.','MANOJ AGRAWAL','Mumbai','Mainframe','Bachelor of
Technology','9','Manoj.Agrawal@alliance.com','fac6@123'),
('F007','Ms.','MEENA KULKARNI','Coimbatore','Testing','Bachelor of
Technology','5','Meena.Kulkarni@alliance.com','fac7@123'),
('F009','Mr.','SAGAR MENON','Mumbai','Java','Master of Science In Information
Technology','12','Sagar.Menon@alliance.com','fac8@123');

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

INSERT
INTO Module_info(module_id,module_name,module_duration)
VALUES
('O10SQL','Oracle 10g SQL',16),
('O10PLSQL','Oracle 10g PL/ SQL' ,16),
('J2SE','Core Java SE 1.6',288),
('J2EE','Advanced Java EE 1.6',80),
('JAVAFX','JavaFX 2.1',80),
('DOTNT4','.Net Framework 4.0',50),
('SQL2008','MS SQl Server 2008',120),
('MSBI08','MS BI Studio 2008',158),
('SHRPNT','MS Share Point',80),
('ANDRD4','Android 4.0',200),
('EM001','Instructor',0),
('EM002','Course Material',0),
('EM003','Learning Effectiveness',0),
('EM004','Environment',0),
('EM005','Job Impact',0),
('TM001','Attendees',0),
('TM002','Course Material',0),
('TM003','Environment',0);

INSERT

INTO
Assoiciate_info(associate_id,salutation,associate_name,associate_location,associate_track,associate
_qualification,associate_email,associate_password)

VALUES

('A001','Miss.','GAYATHRI NARAYANAN','Gurgaon','Java','Bachelor of
Technology','Gayathri.Narayanan@hp.com','tne1@123'),

('A002','Mrs.','RADHIKA MOHAN','Kerala','Java','Bachelor of Engineering In Information
Technology','Radhika.Mohan@cognizant.com','tne2@123'),

('A003','Mr.','KISHORE SRINIVAS','Chennai','Java','Bachelor of Engineering In
Computers','Kishore.Srinivas@ibm.com','tne3@123'),

('A004','Mr.','ANAND RANGANATHAN','Mumbai','DotNet','Master of Computer
Applications','Anand.Ranganathan@finolex.com','tne4@123'),

('A005','Miss.','LEELA MENON','Kerala','Mainframe','Bachelor of Engineering In Information
Technology','Leela.Menon@microsoft.com','tne5@123'),

('A006','Mrs.','ARTI KRISHNAN','Pune','Testing','Master of Computer
Applications','Arti.Krishnan@cognizant.com','tne6@123'),

('A007','Mr.','PRABHAKAR SHUNMUGHAM','Mumbai','Java','Bachelor of
Technology','Prabhakar.Shunmugham@honda.com','tne7@123');

```sql
INSERT

INTO  Questions(question_id,module_id,question_text)

VALUES

('Q001','EM001','Instructor knowledgeable and able to handle all your queries'),

('Q002','EM001','All the topics in a particular course handled by the trainer without any gaps or slippages'),

('Q003','EM002','The course materials presentation, handson,  etc. refered during the training are relevant and useful.'),

('Q004','EM002','The Hands on session adequate enough to grasp the understanding of the topic.'),

('Q005','EM002','The reference materials suggested for each module are adequate.'),

('Q006','EM003','Knowledge and skills presented in this training are applicatible at your work'),

('Q007','EM003','This training increases my proficiency level'),

('Q008','EM004','The physical environment e.g. classroom space, air-conditioning was conducive to learning.'),

('Q009','EM004','The software/hardware environment provided was sufficient for the purpose of the training.'),

('Q010','EM005','This training will improve your job performance.'),

('Q011','EM005','This training align with the business priorities and goals.'),

('Q012','TM001','Participants were receptive and had attitude towards learning.'),

('Q013','TM001','All participats gained the knowledge and the practical skills after this training.'),

('Q014','TM002','The course materials presentation, handson,  etc. available for the session covers the entire objectives of the course.'),

('Q015','TM002','Complexity of the course is adequate for the particpate level.'),

('Q016','TM002','Case study and practical demos helpful in understanding of the topic'),

('Q017','TM003','The physical environment e.g. classroom space, air-conditioning was conducive to learning.'),

('Q018','TM003','The software/hardware environment provided was adequate  for the purpose of the training');


ALTER TABLE Assoiciate_info

ADD trainer_id varchar(20),

ADD batch_id varchar(20);
```

```sql
INSERT
INTO  Assoiciate_status (associate_id,module_id,batch_id,trainer_id,start_date,end_date)
VALUES
('A001','O10SQL','B001','F001','2000-12-15','2000-12-25'),
('A002','O10SQL','B001','F001','2000-12-15','2000-12-25'),
('A003','O10SQL','B001','F001','2000-12-15','2000-12-25'),
('A001','O10PLSQL','B002','F002','2001-2-1','2001-2-12'),
('A002','O10PLSQL','B002','F002','2001-2-1','2001-2-12'),
('A003','O10PLSQL','B002','F002','2001-2-1','2001-2-12'),
('A001','J2SE','B003','F003','2002-8-20','2002-10-25'),
('A002','J2SE','B003','F003','2002-8-20','2002-10-25'),
('A001','J2EE','B004','F004','2005-12-1','2005-12-25'),
('A002','J2EE','B004','F004','2005-12-1','2005-12-25'),
('A003','J2EE','B004','F004','2005-12-1','2005-12-25'),
('A004','J2EE','B004','F004','2005-12-1','2005-12-25'),
('A005','JAVAFX','B005','F006','2005-12-4','2005-12-20'),
('A006','JAVAFX','B005','F006','2005-12-4','2005-12-20'),
('A006','SQL2008','B006','F007','2007-6-21','2007-6-28'),
('A007','SQL2008','B006','F007','2007-6-21','2007-6-28'),
('A002','MSBI08','B007','F006','2009-6-26','2009-6-29'),
('A003','MSBI08','B007','F006','2009-6-26','2009-6-29'),
('A004','MSBI08','B007','F006','2009-6-26','2009-6-29'),
('A002','ANDRD4','B008','F005','2010-6-5','2010-6-28'),
('A005','ANDRD4','B008','F005','2010-6-5','2010-6-28'),
('A003','ANDRD4','B009','F005','2011-8-1','2011-8-20'),
('A006','ANDRD4','B009','F005','2011-8-1','2011-8-20');
```

Exercise 3

```
UPDATE Trainer_info

set trainer_password='nn4@123'

where trainer_id='F004';


select * from Trainer_info

where trainer_id='F004';
```

Exercise 4

```
DELETE FROM Assoiciate_status

WHERE associate_id = 'A003';


select * from Assoiciate_status

where associate_id='A003';
```

Exercise 5

```
SELECT *

FROM Trainer_info

ORDER BY trainer_experience DESC

limit 5;
```

Exercise 6

```
START TRANSACTION;

SELECT * FROM Login_details;

UPDATE Login_details SET user_id='U001',user_password='Admin1@123';

UPDATE Login_details SET user_id='U002',user_password='Admin2@123';

rollback;
```

Exercise 7

CREATE USER 'dummy'@'localhost' IDENTIFIED BY 'password' ; GRANT CREATE ON handson TO 'dummy'@'localhost';

GRANT SELECT ON handson.Login_details TO 'dummy'@'localhost'; START TRANSACTION ;

SELECT* FROM Login_details ;

INSERT INTO Login_details VALUES ('U00l' ,'Admin1@123'), ('U002','Admin2@123');

ROLLBACK;

REVOKE CREATE ON handson FROM 'dummy'@'localhost';

REVOKE SELECT ON handson.Login_details FROM 'dummy'@'localhost';

Exercise 8

DROP TABLE Login_details;

Exercise 9

CREATE TABLE supplies(supplier_id int Not Null,

supplier_name varchar(50) Not Null,

address varchar(50),

city varchar(50),

state varchar(25),

zip_code varchar(10));

Exercise 10

CREATE TABLE Course_fees_history (course_code varchar(25),

base_fees int,

special_fees int,

created_by varchar(25),

updated_by varchar(25),

primary key (course_code));

```sql
CREATE TABLE course_fees(

course_code varchar(25),

base_fees int,

special_fees int,

discount int);


INSERT INTO course_fees

VALUES

('1',180,100,10),

('2',150,110,10),

('3',160,170,5),

('4',150,100,10),

('6',190,100, 40);


INSERT INTO Course_fees_history

VALUES

('1',120,123,'Ram','Ramesh'),

('2',150,110,'Bala','Ram'),

('3',160,170,'Bala','Vinu'),

('4',170,235,'Ram','Ram'),

('6',190,100,'Vinod','Vinod');


SELECT course_code,base_fees,special_fees FROM Course_fees UNION

SELECT course_code,base_fees,special_fees FROM Course_fees_history;
```

Exercise 10

select Course_fees.course_code, Course_fees.base_fees, Course_fees.special_fees from Course_fees_history

inner join Course_fees

on Course_fees_history.course_code = Course_fees.course_code

and Course_fees_history.base_fees = Course_fees.base_fees

and Course_fees_history.special_fees = Course_fees.special_fees ;

Exercise 11

CREATE TABLE COURSE_INFO(

COURSE_CODE varchar(10),

COURSE_NAME varchar(20) NOT NULL,

COURSE_DESCRIPTION varchar(25),

COURSE_START_DATE Date ,

COURSE_DURATION int,

NO_OF_PARTICIPANTS int,

COURSE_TYPE Char(3),

primary key (COURSE_CODE));

CREATE TABLE STUDENT_INFO(

STUDENT_ID varchar(10),

FIRST_NAME varchar(20),

LAST_NAME varchar(25),

ADDRESS varchar(150),

PRIMARY KEY(STUDENT_ID));

Exercise 12

INSERT INTO COURSE_FEES VALUES ('7',NULL,200,25), ('8',NULL,300,50);

INSERT INTO course_fees VALUES ('9',300,300,50),('10',175,100,25);

```
SELECT* FROM course_fees;

SELECT MIN(IFNULL(base_fees,0)),MAX(base_fees)

FROM course_fees;
```

Exercise 13 (ASSUMING PRE-REQUISITE OF EX 14 AS PRE-REQUISITE OF EX 13)

```
ALTER TABLE course_fees ADD infra_fees DECIMAL(5,3);

INSERT INTO COURSE_FEES (INFRA_FEES)

VALUES (41.123),(42.123),(43.123),(44.123),(45.123),

(46.123),(47.123),(48.123),(49.123),(50.123);

SELECT AVG(infra_fees) AS AVG_INFRA_FEES

 FROM course_fees;
```

Exercise 14

PRE-REQUISITE

```
INSERT  INTO  course_info

(COURSE_CODE, COURSE_NAME, COURSE_DESCRIPTION, COURSE_START_DATE,
COURSE_DURATION, NO_OF_PARTICIPANTS, COURSE_TYPE )

VALUES

('C001','SQL','MYSQL','2022-08-15',3,'20','ON'),

('C002','PYTHON','LANGUAGE','2022-08-22','5','30','OFF'),

('C003','JAVA','PROGRAMMING','2022-08-29','4','10','OFF'),

('C005','AZURE','CLOUD','2022-09-05','1','22','ON');
```

SOLUTION

```
SELECT COURSE_NAME,

DATEDIFF(COURSE_START_DATE , CURRENT_DATE()) AS DAYSLEFT

FROM course_info;
```

Exercise 15

```
SELECT CONCAT(course_name,' ',course_code) AS COURSE_DETAIL

FROM course_info;
```

Exercise 16

```sql
SELECT AVG(IFNULL(base_fees,0)) AS AVG_BASE_FEES
FROM course_fees;
```

Exercise 17

```sql
SELECT COURSE_CODE, COURSE_NAME, COURSE_TYPE,
CASE
    WHEN COURSE_TYPE='CLR' THEN 'CLASS ROOM'
    WHEN COURSE_TYPE='EL' THEN 'E-LEARNING'
    WHEN COURSE_TYPE='OF' THEN 'OFFLINE READING'
END AS MESSAGE
FROM course_info;
```

Exercise 18

```sql
SELECT course_start_date, SUM(NO_OF_PARTICIPANTS) as NO_OF_PARTICIPANTS
FROM course_info
GROUP BY course_start_date;
```

Exercise 19

```sql
SELECT course_start_date, SUM(NO_OF_PARTICIPANTS) as CLR_PARTICIPANTS
FROM course_info
WHERE course_type='CLR'
GROUP BY course_start_date;
```

Exercise 20

```sql
SELECT course_start_date, SUM(NO_OF_PARTICIPANTS) as CLR_PARTICIPANTS
FROM course_info
WHERE course_type='CLR'
GROUP BY course_start_date
HAVING SUM(NO_OF_PARTICIPANTS)>10 ;
```

Exercise 21

SELECT course_name, course_duration

FROM course_info

ORDER BY course_duration;

Exercise 22

SELECT student_info.student_id, student_info.first_name, student_info.last_name, STUDENT_COURSES.course_code

FROM student_info

INNER JOIN STUDENT_COURSES

ON student_info.STUDENT_ID = STUDENT_COURSES.STUDENT_ID

WHERE STUDENT_COURSES.course_code='167';

Exercise 23

SELECT course_fees.discount, course_info.course_description

FROM course_fees

INNER JOIN course_info

ON course_info.course_code=course_fees.course_code

ORDER BY course_fees.discount DESC;

Exercise 24

LEFT JOIN

SELECT STUDENT_INFO.FIRST_NAME, STUDENT_COURSES.COURSE_CODE

FROM STUDENT_INFO

LEFT JOIN STUDENT_COURSES

ON STUDENT_COURSES.STUDENT_ID=student_info.STUDENT_ID;

FIRST_NAME	COURSE_CODE
AMRITHA	167
PRADEEP	1
VINOTH	167
PRAVEEN	4

RIGHT JOIN

SELECT STUDENT_INFO.FIRST_NAME, STUDENT_COURSES.COURSE_CODE

FROM STUDENT_INFO

RIGHT JOIN STUDENT_COURSES

ON STUDENT_COURSES.STUDENT_ID=student_info.STUDENT_ID;

FIRST_NAME	COURSE_CODE
AMRITHA	167
VINOTH	167
PRADEEP	1
PRAVEEN	4

Exercise 25

SELECT STUDENT_COURSES.STUDENT_ID

FROM STUDENT_COURSES

LEFT OUTER JOIN course_fees

ON STUDENT_COURSES.COURSE_CODE=course_fees.course_code

WHERE course_fees.base_fees<1500;

Exercise 26

SELECT DISTINCT STUDENT_INFO.STUDENT_ID, STUDENT_INFO.FIRST_NAME

FROM STUDENT_INFO

INNER JOIN STUDENT_COURSES

ON STUDENT_COURSES.STUDENT_ID=STUDENT_INFO.STUDENT_ID

INNER JOIN course_fees

ON STUDENT_COURSES.COURSE_CODE=course_fees.course_code

WHERE course_fees.base_fees<1500;