Assignment no: 01

Task 1:

1. Create a table named COURSE with the following structure:
   a. Course_ID (int, Primary Key)
   b. Course_Name (varchar(50), Not Null)
   c. Credits (int)
2. Add a new column Instructor to the COURSE table with a constraint UNIQUE.
3. Change the datatype of Credits from number(2) to number(3) in the COURSE table.
4. Rename the column Course_Name to Course_Title in the COURSE table.
5. Delete the column Instructor from the COURSE table.

```
 1 create database lab01;
 2 create table Course(
 3   course_id int Primary key,
 4   course_name varchar(50),
 5   credit int
 6 );
 7
 8 alter TABLE Course ADD Instructor varchar(50) UNIQUE;
 9 alter TABLE Course MODIFY credit int(3);
10 alter TABLE Course CHANGE  course_name  course_title varchar(50);
11 alter TABLE Course DROP COLUMN  Instructor;
```

Task 2:

1. Create a table named DEPARTMENT with the following structure:
    a. Dept_ID (int, Primary Key)
    b. Dept_Name (varchar(30), Not Null)
2. Add a new column, Location, to the DEPARTMENT table.
3. Change the datatype of Dept_Name from varchar2(30) to varchar2(50) in the DEPARTMENT table.
4. Rename the column Dept_Name to Department_Name in the DEPARTMENT table.
5. Delete the column Location from the DEPARTMENT table.

```sql
1 create database lab01;
2 create table Department(
3   Dept_id int Primary key,
4   Dept_name varchar(50)
5 );
6 alter TABLE Department ADD location varchar(50);
7 alter TABLE Department MODIFY Dept_name varchar(100);
8 alter TABLE Department CHANGE Dept_name Department_name varchar
  (100);
9 alter TABLE Department DROP location;
```

Task 3:

1. Create a table named INSTRUCTOR with the following structure:
    a. Instructor_ID (number(3), Primary Key)
    b. instructor_Name (varchar2(50), Not Null)
    c. Dept_ID (number(2), Foreign Key references DEPARTMENT)
2. Add a new column Hire_Date to the INSTRUCTOR table.
3. Change the datatype of Hire_Date from date to timestamp in the INSTRUCTOR table.
4. Rename the column Instructor_Name to Name in the INSTRUCTOR table.
5. Delete the column Hire_Date from the INSTRUCTOR table.

```
1 create database lab01;
2 create table Department(
3   Dept_id int Primary key,
4   Dept_name varchar(50)
5 );
6 alter TABLE Department ADD location varchar(50);
7 alter TABLE Department MODIFY Dept_name varchar(100);
8 alter TABLE Department CHANGE Dept_name Department_name varchar (100);
9 alter TABLE Department DROP location;
10
11
12 create table instructor(
13 instructor_id int(3) Primary key,
14  instructor_name varchar(50),
15   Dept_id int,
16   foreign key (Dept_id) references Department(Dept_id)
17 );
18 alter TABLE instructor ADD Hire_Date date;
19 alter TABLE instructor MODIFY Hire_Date timestamp;
20 alter TABLE instructor CHANGE instructor_name name varchar(50);
21 alter TABLE instructor DROP Hire_Date;
```

Task 4:

1. Create a table named BOOKS with the following structure:
    a. Book_ID (number(3), Primary Key)
    b. Title (varchar2(100), Not Null)
2. Author (varchar2(50), Not Null)
3. Insert 3 rows into the BOOKS table.
4. Add a new column Published_Year to the BOOKS table.
5. Insert the publication year for each book.
6. Display all books published after 2010.

```sql
1  create database lab01;
2  create table book(
3  book_id int(3) Primary key,
4    title varchar(100),
5    Author varchar (100)
6  );
7  INSERT INTO book(book_id ,title ,Author) values (1 ,'Last day of life' ,'Mushaf');
8  INSERT INTO book(book_id ,title ,Author) values (2 ,'last hope' ,'Mudassir');
9  INSERT INTO book(book_id ,title ,Author) values (3 ,'Turning point' ,'Hasnain');
10
11 alter TABLE book ADD Published_year int;
12
13 update book  set Published_year=2025 where book_id =1;
14 update book  set Published_year=2001 where book_id =2;
15 update book  set Published_year=2020 where book_id =3;
16 select * from book where Published_year >= 2010;
```