----- emp, dept,
system login
1. location -> lid -> pk, city, gen values using sequence, insert data
2. alter dept-> lid -> relate dept location, add corresponding entries
user login
--> join-> 3 table
firstname from employee which dept-> deptname, city of employee
--> print empl-> id firstname, having highest salary
        having second highest salary

System login

sys as sysdba

```
SQL> CREATE TABLE location (
  2    lid INT PRIMARY KEY ,
  3    city VARCHAR(50) NOT NULL
  4  );
```

```
SQL> CREATE TABLE dept (
  2    id INT PRIMARY KEY ,
  3    name VARCHAR(50) NOT NULL
  4  );

Table created.
```

```
SQL> CREATE TABLE employee (
  2    id INT ,
  3    first_name VARCHAR(50) NOT NULL,
  4    salary DECIMAL(10,2) NOT NULL,
  5    dept_id INT,
  6    city_id INT,
  7    FOREIGN KEY (dept_id) REFERENCES dept(id) ,
  8    FOREIGN KEY (city_id) REFERENCES location(lid),
  9    PRIMARY KEY(id)
 10  );

Table created.
```

. location -> lid -> pk, city, gen values using sequence, insert data

```
SQL> INSERT INTO location VALUES
  2  (1,'New York');

1 row created.

SQL> INSERT INTO location VALUES
  2  (2,'London');

1 row created.

SQL> INSERT INTO location VALUES
  2  (3,'Paris');

1 row created.
```

```
5
SQL> create sequence s
  2  start with 4
  3  increment by 1
  4  minvalue 1
  5  maxvalue 100
  6  cycle;

Sequence created.

SQL> insert into location values (s.nextval , 'Siwan');

1 row created.

SQL> insert into location values (s.nextval , 'Sikkim');
```

```
SQL> alter table dept add lid int;

Table altered.

SQL> alter table dept add constraint fkct foreign key (lid) references location(lid);

Table altered.

SQL> select * from dept;

        ID NAME                                                         LID
---------- -------------------------------------------------- ----------
         1 HR
         2 FINANCE
         3 IT

SQL> update dept set lid=s1.nextval;

3 rows updated.
```

user login

```
SQL> alter session set "_ORACLE_SCRIPT" = true;

Session altered.

SQL> create user demouser identified by password;

User created.
```

```
SQL> grant all on sys.employee to demouser;

Grant succeeded.
```

```
SQL> grant all on sys.dept to demouser;

Grant succeeded.

SQL> grant all on sys.location to demouser;

Grant succeeded.
```

```
Copyright (c) 1982, 2021, Oracle.  All rights reserved.

Enter user-name: demouser
Enter password:
Last Successful login time: Fri Feb 03 2023 16:49:10 +05:30

Connected to:
Oracle Database 21c Enterprise Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL> _
```

--> join-> 3 table
firstname from employee which dept-> deptname, city of employee
--> print empl-> id firstname, having highest salary
          having second highest salary

```
SELECT first_name, location.city, dept.name

FROM sys.employee

JOIN sys.dept ON sys.employee.dept_id = sys.dept.id

JOIN sys.location ON sys.dept.lid = sys.location.lid;
```

```
FIRST_NAME
-------------------------------------------------
CITY
-------------------------------------------------
NAME
-------------------------------------------------
Shubham
New York
HR

Gautam
London
FINANCE

FIRST_NAME
-------------------------------------------------
CITY
-------------------------------------------------
NAME
-------------------------------------------------

Rishav
Paris
IT
```

```
SELECT id, first_name

FROM sys.employee

WHERE salary = (SELECT MAX(salary) FROM sys.employee);
```

```
        ID FIRST_NAME
---------- -------------------------------------------------
         2 Shubham
```

```sql
SELECT id, first_name
FROM sys.employee
WHERE salary = (
  SELECT MAX(salary)
  FROM (
    SELECT salary
    FROM sys.employee
    WHERE salary NOT IN (SELECT MAX(salary) FROM sys.employee)
  ) t
);
```

```
        ID FIRST_NAME
---------- --------------------------------------------------
         3 Rishav
```