**DBS Lab Assignment # 8**

USE Migrant database:

1. Write a JDBC program using prepared statements that takes Skill as input and displays the name, ph no, address and job locations of all migrants. List third and fourth and first row of the result set in order. Update the phone number field in the resultset for a row and display that row.
2. In the previous problem, pad +91 before phone number and display.
3. Create two new relations with following schema.

Company\_Req(cname, job type, job\_location, vacancy, skill\_required)

Place\_Migrant(cname, enroll\_ID, job type, osalary, job\_location, place\_date)

The Company\_Req relation stores available job information where (cname, job type, job\_location) is primary key. Vacancy represents number of openings available. The Place\_Migrant relation holds placement of migrants in respective companies. The data in this table will be populated automatically using a trigger as and when data inserted in Company\_Req table. The process is as follows:

When a record is inserted in Company\_Req, a trigger will check the records in MIGRANTW relation to match skill\_required and job\_location. In case, there is match, it will insert first X number of migrants (sorted by enroll\_date) into Place\_Migrant relation, where X <= “vacancy”. You can consider some value for osalary attribute and place\_date is SYSDATE. You can use cursor to keep migrant details based on matching criteria and use it for inserting X number of records into Place\_Migrant relation.

1. Add an attribute Status in MIGRANTW table. Mark all placed migrants’ status as “P” and rest as “U”
2. Rollback the insert operation in “Company\_req” table. Observe, whether the related records in Place\_Migrant is automatically removed (i.e. rollback on Place\_Migrant is automatically applied).
3. Create a view on details of placed Migrants as follows: <Name, Ph No, Company Name, osalary, job\_location, place\_date>
4. Use this view to display company-wise migrants count placed and total\_salary invested for them.
5. Write a JDBC program to insert a record in MIGRANTW with 12 digit phone number input whereas, phone no field is of char(10) data type. Catch the exception for this insertion and report/display the error message.
6. SET AUTOCOMIT OFF; then perform the following sequence of updates.
   1. Insert a record in Place\_Migrant with relevant values. COMMIT;
   2. Update Place\_Migrant by modifying salary of the inserted record. ROLLBACK;

Experiment with similar type of updates with COMMIT and ROLLBACK.

1. Assume, vacancies of some of the companies are partially filled as suitable skilled migrants are not available. Write a PL/SQL program for displaying the name of the companies along with the count of vacancies which are not filled.
2. Create a table called

user(username, password, dob)

Insert 5 tuples in it.

Write JDBC programs to execute the following SQL statements

(a) select \* from user where username='xxxx OR x=x';

(b) select \* from user where username='xxxx' AND password='pwd123 OR x=x';

(c) select \* from user where username='. . - - AND password=. . . .';

(d) select \* from user where username=' - - drop table table\_name';

1. Set autocommit off. Run a sequence of transaction (with updates) with commit in between and without commit. Shut off SQL PLUS. See the content of the tables.
2. Insert through view that inserts new employee in EMP for a given department name (use instead of trigger) – consider HR database