```
create database employee_app;
create table employees(employee_number int unique, employee_joined_date date);
```

Inner join
```
SELECT title, domestic_sales, international_sales
FROM movies
JOIN boxoffice on movies.id = boxoffice.movie_id
```

Left join
```
SELECT
        c.customer_id,
        c.first_name,
        o.order_id
FROM customers c
LEFT JOIN orders o
        ON c.customer_id = o.customer_id
ORDER BY c.customer_id
```

Right join
```
SELECT
        c.customer_id,
        c.first_name,
        o.order_id
FROM orders o
RIGHT JOIN customers c
        ON c.customer_id = o.customer_id
ORDER BY c.customer_id
```

Cross join
```
SELECT
        c.first_name AS customer,
        p.name AS product
FROM customers c
CROSS JOIN products p
ORDER BY c.first_name
```

Commit
```
SQL> DELETE FROM customers
        WHERE age = 25;
SQL>COMMIT;
```

Select will produce updated table with age 25 rows deleted

Rollback

```
SQL> DELETE FROM customers
        WHERE age = 25;
SQL>ROLLBACK;
```

The delete operation would not impact the table

Savepoint
```
SQL> SAVEPOINT SP1;
SQL> DELETE FROM customers WHERE id=1;
SQL> SAVEPOINT SP2;
SQL> DELETE FROM customers WHERE id=2;
SQL> SAVEPOINT SP3;
SQL> DELETE FROM customers WHERE id=3;

SQL> ROLLBACK TO SP2;
```

id=1 will stay deleted, other deletion are undone

```
SQL> RELEASE SAVEPOINT SP2
```

Subqueries
```
UPDATE invoices
SET
        payment_total = invoice_total *0.5,
        Payment_date = due_date
WHERE client_id =
                (SELECT client_id
                FROM clients
                WHERE name = 'Myworks' )
```

Procedure
```
CREATE PROCEDURE SelectAllCustomers @City varchar(30), @PostalCode varchar(10)
AS
SELECT * FROM Customers WHERE City = @City AND PostalCode = @PostalCode
GO;

EXEC SelectAllCustomers @City = 'London', @PostalCode = 'WA1 1DP';
```

Views
```
CREATE VIEW brazil_customers AS
SELECT
        Customer_name, contact_number
FROM customers
WHERE country = 'Brazil'
```

```java
 import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;

public class JDBCExample {
   static final String DB_URL = "...";
   static final String USER = "guest";
   static final String PASS = "guest123";
   static final String QUERY = "SELECT id, first, last, age FROM Registration";

   public static void main(String[] args) {
      try(Connection conn = DriverManager.getConnection(DB_URL, USER, PASS);
         Statement stmt = conn.createStatement();
         ResultSet rs = stmt.executeQuery(QUERY);
      ) {
         System.out.println("Inserting records into the table...");
         String sql = "INSERT INTO Registration VALUES (100, 'Zara', 'Ali', 18)";
         stmt.executeUpdate(sql);
         sql = "INSERT INTO Registration VALUES (101, 'Mahnaz', 'Fatma', 25)";
         stmt.executeUpdate(sql);
         sql = "INSERT INTO Registration VALUES (102, 'Zaid', 'Khan', 30)";
         stmt.executeUpdate(sql);
         sql = "INSERT INTO Registration VALUES(103, 'Sumit', 'Mittal', 28)";
         stmt.executeUpdate(sql);
         System.out.println("Inserted records into the table...");


         while(rs.next()){
            System.out.print("ID: " + rs.getInt("id"));
            System.out.print(", Age: " + rs.getInt("age"));
            System.out.print(", First: " + rs.getString("first"));
            System.out.println(", Last: " + rs.getString("last"));
         }

      } catch (SQLException e) {
         e.printStackTrace();
      }
   }
}
```