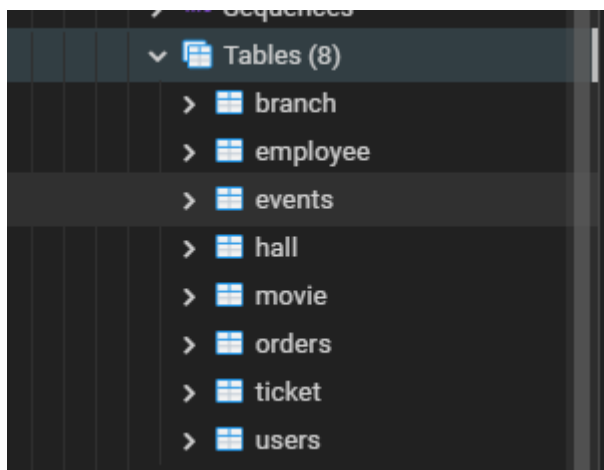# Даалгавар№-8 Embedded SQL

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Асуулт: Insert, Delete, Update, Select query өөрсдийн сонгон авсан өгөгдлийн сангууд дээр ашиглана. Select query нь заавал гурав (аль нэг хүснэгт нь заавал дундын хүснэгт байхыг анхаарна уу.) болон түүнээс дээш хүснэгтийг ашигласан бодит жишээ байх ёстойг анхаарна уу.

Сонгон авсан өгөгдлийн сан: Тэнгис кино театр

USERS хүснэгт

id [PK] integer	l_name character varying (255)	f_name character varying (255)	phone_number integer	email character varying (255)
1	1	bolormaa	uuganbayar	99708150	bolormaa@gmail.com
2	2	tsetsegmaa	uuganaa	99999999	tsetsegmaa@gmail.com
3	3	khangerel	uugan	88888888	khangerel@gmail.com
4	4	tsend_ayush	osorjamaa	90909090	tsendee@gmail.com
5	5	uuganbayr	turmunkh	98989898	uuganaa@gmail.com

ORDERS хүснэгт

id [PK] integer	total_payment integer	users_id integer	employee_id integer	order_code integer	total integer	orders_date date
1	7001	7500000	1	10	[null]	500	2022-02-28
2	7002	4500000	3	11	[null]	300	2021-04-28
3	7003	3705000	5	12	[null]	247	2023-02-14

Employee хүснэгт

id [PK] integer	last_name character varying (255)	first_name character varying (255)	phone_number integer	home_adress character varying (255)	salary integer
1	10	bataa	bold	88111111	ih toiruu st	2500000
2	11	dorjoo	dulam	88222222	urt tsagaan st	3500000
3	12	selengee	sender	88333333	jukov st	3000000

MOVIE хүснэгт

id [PK] integer	title character varying (255)	description character varying (255)	language_type character varying (255)	director character varying (255)
1	6	avatar_1	maash goy kino goy ym gardG	english	John
2	7	avatar_2	ynziin kino shvv	english	John Harthman
3	8	frozen	urt vstei gvn garnaa	english	bella
4	9	zura	omogshood I yvchdg kino doo	english	Joy

duration_time integer	release_date timestamp without time zone	movie_price integer	movie_type character varying (255)	modified_at timestamp without time zone
4	2023-03-25 18:00:00	15000	adal yvdalt	2023-03-28 15:53:20.577818
3	2023-03-30 18:00:00	20000	animation	2023-03-28 15:53:20.577818
1	2023-04-25 18:00:00	13000	cartoon	2023-03-28 16:46:33.329643
2	2023-03-25 18:00:00	15000	horror	2023-03-28 15:53:20.577818

order_ticket хүснэгт:

order_id [PK] integer	ticket_id [PK] integer	quantity integer
1	7001	999	3
2	7002	989	2
3	7003	979	1

movie хүснэгт:

id [PK] integer	ticket_type character varying (255)	price integer	quantity integer
1	979	VIP	30000	5
2	989	VIP	30000	10
3	999	regular	10000	100

1. **Insert Query**

   employee хүснэгтэн дээр шинэ ажилтан нэмэх

```java
import java.sql.*;

public class Insert{
  public static void main(String[] args) {
    String url = "jdbc:postgresql://localhost/mama";
    String user = "postgres";
    String userPassword = "123";

    int id = 13;
    String last_name = "sergelen";
    String first_name = "jambaa";
    int phone_number = 99119999;
```

```java
    String home_adress = "ankara";
    int salary = 4000000;
    try {
        Connection connection = DriverManager.getConnection(url, user, userPassword);
        if (connection != null)
            System.out.println("Connected");
        else
            System.out.println("Not Connected");
        String sql = "INSERT INTO employee (id, last_name, first_name, phone_number, home_adress, salary)"
                + " VALUES (?, ?, ?, ?, ?, ?)";
        PreparedStatement statement = connection.prepareStatement(sql);
        statement.setInt(1, id);
        statement.setString(2, last_name);
        statement.setString(3, first_name);
        statement.setInt(4, phone_number);
        statement.setString(5, home_adress);
        statement.setInt(6, salary);
        statement.executeUpdate();
    } catch (SQLException e) {
        System.out.println(e.getMessage());
    }
  }
}
```

```
C:\Users\DELL\.jdks\openjdk-20.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.1\lib\idea_rt.jar=59853:C:\Program Files\JetBrain
Connected

Process finished with exit code 0
```
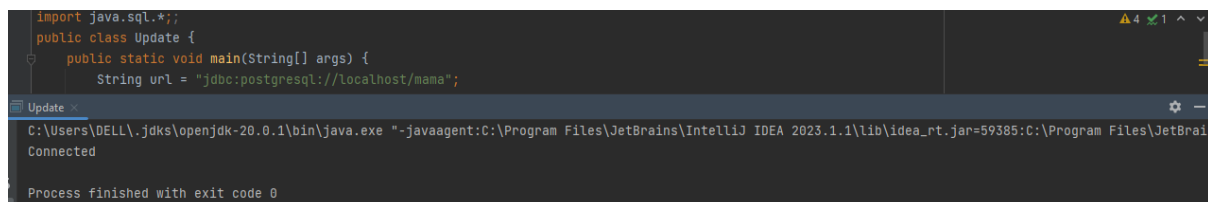
Query ажиллахаас өмнө:

	id [PK] integer	last_name character varying (255)	first_name character varying (255)	phone_number integer	home_adress character varying (255)	salary integer
1	10	bataa	bold	88111111	ih toiruu st	2500000
2	11	dorjoo	dulam	88222222	urt tsagaan st	3500000
3	12	selengee	sender	88333333	jukov st	3000000

Query ажилласны дараа:

	id [PK] integer	last_name character varying (255)	first_name character varying (255)	phone_number integer	home_adress character varying (255)	salary integer
1	10	bataa	bold	88111111	ih toiruu st	2500000
2	11	dorjoo	dulam	88222222	urt tsagaan st	3500000
3	12	selengee	sender	88333333	jukov st	3000000
4	13	sergelen	jambaa	99119999	ankara	4000000

2. Update Query

Movie хүснэгтэн дэх zura киноны language_type-ийг монгол болгож өөрчлөх

```java
import java.sql.*;;
public class Update {
  public static void main(String[] args) {
    String url = "jdbc:postgresql://localhost/mama";
    String user = "postgres";
    String userPassword = "123";

    String title = "zura";
    String language_type = "Mongol";
    try {
      Connection connection = DriverManager.getConnection(url, user, userPassword);
      if (connection != null)
        System.out.println("Connected");
      else
        System.out.println("Not Connected");
      String sql = "UPDATE movie SET language_type=? WHERE title = ?"
            ;
      java.sql.PreparedStatement statement = connection.prepareStatement(sql);
      statement.setString(1, language_type);
      statement.setString(2, title);
      statement.executeUpdate();
    } catch (SQLException e) {
      System.out.println(e.getMessage());
    }
  }
}
```

```
import java.sql.*;;
public class Update {
    public static void main(String[] args) {
        String url = "jdbc:postgresql://localhost/mama";
```

Update ×

```
C:\Users\DELL\.jdks\openjdk-20.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.1\lib\idea_rt.jar=59385:C:\Program Files\JetBrain
Connected

Process finished with exit code 0
```

Query ажиллахаас өмнө:

	id [PK] integer	title character varying (255)	description character varying (255)	language_type character varying (255)	director character varying (255)
1	6	avatar_1	maash goy kino goy ym gardG	english	John
2	7	avatar_2	ynziin kino shvv	english	John Harthman
3	8	frozen	urt vstei gvn garnaa	english	bella
4	9	zura	omogshood I yvchdg kino doo	english	Joy

Query ажилласны дараа:

id [PK] integer	title character varying (255)	description character varying (255)	language_type character varying (255)	director character varying (255)
1	6	avatar_1	maash goy kino goy ym gardG	english	John
2	7	avatar_2	ynziin kino shvv	english	John Harthman
3	8	frozen	urt vstei gvn garnaa	english	bella
4	9	zura	omogshood l yvchdg kino doo	Mongol	Joy

3. Delete Query
Movie хүснэгтийн id=7 киног устгах

```java
import java.sql.*;

public class Delete {
  public static void main(String[] args) {
    String url = "jdbc:postgresql://localhost/mama";
    String user = "postgres";
    String userPassword = "123";
    try {
      Connection connection = DriverManager.getConnection(url, user, userPassword);
      if (connection != null)
        System.out.println("Connected");
      else
        System.out.println("Not Connected");
      String sql = "DELETE FROM movie WHERE id = ?";
      PreparedStatement statement = connection.prepareStatement(sql);
      statement.setInt(1, 7);
      int rowsDeleted = statement.executeUpdate();
      System.out.println(rowsDeleted + " row(s) deleted.");
    } catch (SQLException e) {
      System.out.println(e.getMessage());
    }
  }
}
```

```
public class Delete {
    public static void main(String[] args) {
        String url = "jdbc:postgresql://localhost/mama";
        String user = "postgres";
Delete ×
C:\Users\DELL\.jdks\openjdk-20.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.1\lib\idea_rt.jar=56095:C:\Program Files\JetBrain
Connected
1 row(s) deleted.

Process finished with exit code 0
```

Query ажиллахаас өмнө:

id [PK] integer	title character varying (255)	description character varying (255)	language_type character varying (255)	director character varying (255)
1	6 avatar_1	maash goy kino goy ym gardG	english	John
2	7 avatar_2	ynziin kino shvv	english	John Harthman
3	8 frozen	urt vstei gvn garnaa	english	bella
4	9 zura	omogshood I yvchdg kino doo	english	Joy

Query ажилласны дараа:

id [PK] integer	title character varying (255)	description character varying (255)	language_type character varying (255)	director character varying (255)
1	6 avatar_1	maash goy kino goy ym gardG	english	John
2	8 frozen	urt vstei gvn garnaa	english	bella
3	9 zura	omogshood I yvchdg kino doo	Mongol	Joy

4. Select Query
   orders_date, ticket_type, quantity, price зэрэг мэдээллийг Select хийж харах

```java
import java.sql.*;

public class Select {
    public static void main(String[] args) {
        String url = "jdbc:postgresql://localhost/mama";
        String user = "postgres";
        String userPassword = "123";
        int id = 3;

        try {
            Connection connection = DriverManager.getConnection(url, user, userPassword);
            if (connection != null) {
                System.out.println("Connected");
                String sql = "SELECT o.orders_date, t.ticket_type, ot.quantity, t.price " +
                        "FROM orders o, ticket t, order_ticket ot " +
                        "WHERE o.id = ot.order_id AND t.id = ot.ticket_id AND o.users_id = ? " +
                        "ORDER BY o.orders_date DESC";
                PreparedStatement statement = connection.prepareStatement(sql);
                statement.setInt(1, id);
                ResultSet result = statement.executeQuery();
                while (result.next()) {
                    String orderDate = result.getString("orders_date");
                    String ticketType = result.getString("ticket_type");
                    int quantity = result.getInt("quantity");
                    int price = result.getInt("price");
                    System.out.println(orderDate + " | " + ticketType + " | " + quantity + " | " +
```

```
price);
                }
                // Close the result set, statement, and connection
                result.close();
                statement.close();
                connection.close();
            } else {
                System.out.println("Not connected!");
            }
        } catch (SQLException e) {
            System.out.println("SQL exception occurred: " + e.getMessage());
        }
    }
}
```



```java
public class Select {
    public static void main(String[] args) {
        String url = "jdbc:postgresql://localhost/mama";
        String user = "postgres";
        String userPassword = "123";
        int id = 3;
        try {
```

```
Select ×
C:\Users\DELL\.jdks\openjdk-20.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.1\lib\idea_rt.jar=53877:C:\Program Files\JetBrai
Connected
2021-04-28 | VIP | 2 | 30000

Process finished with exit code 0
```

Select хийсны үр дүн:


```
2021-04-28 | VIP | 2 | 30000
```

Ticket хүснэгт:

id [PK] integer	ticket_type character varying (255)	price integer	quantity integer
1	979	VIP	30000	5
2	989	VIP	30000	10
3	999	regular	10000	100

Orders хүснэгт:

	id [PK] integer	total_payment integer	users_id integer	employee_id integer	order_code integer	total integer	orders_date date
1	7001	7500000	1	10	[null]	500	2022-02-28
2	7002	4500000	3	11	[null]	300	2021-04-28
3	7003	3705000	5	12	[null]	247	2023-02-14

Order_ticket хүснэгт:

	order_id [PK] integer	ticket_id [PK] integer	quantity integer
1	7001	999	3
2	7002	989	2
3	7003	979	1