

ICSI311: **Өгөгдлийн сангийн систем**

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Лабораторийн ажил №8: Embedded SQL

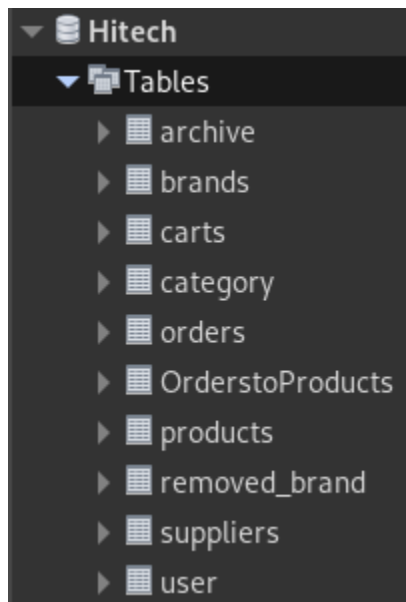
Insert, Delete, Update, Select query өөрсдийн багаар сонгон авсан өгөгдлийн сангууд дээр ашиглана.

Жич: Select query нь заавал гурав болон түүнээс дээш хүснэгтийг ашигласан бодит жишээ байх ёстойг анхаарна уу

Select query нь дангаараа 5 оноо болно. Багаараа гүйцэтгэж болно.

Сонгон авсан өгөгдлийн сан:

Өмнөх лаборатори дээр сонгон авч зохиосон hitech.mn платформын өгөгдлийн санг сонгон авсан.



INSERT Query:

```
public class DatabaseSystemTask {

    public static void main(String[] args) throws SQLException {
        // TODO Auto-generated method stub
        static final String jdbc_driver = "" ;
        String DB_URL = "jdbc:mysql://localhost:3306/Hitech" ;
        String USER = "root" ;
        String PASS = "" ;

        int id = 4 ;
        String first_name = "Dorj" ;
        String last_name = "Bat" ;
        int phone_number = 90330000 ;
        String password = "HelloDBSystem!" ;
        String type = "user" ;
        String email = "raidenuul@gmail.com" ;

        try {
            Connection connection = DriverManager.getConnection(DB_URL, USER, PASS) ;
            String sql = "INSERT INTO user (id, first_name, last_name, phone_number, email, password, type)"
                + " VALUES (?, ?, ?, ?, ?, ?, ?)" ;

            PreparedStatement statement = connection.prepareStatement(sql) ;
            statement.setInt(1, id);
            statement.setString(2, first_name);
            statement.setString(3, last_name);
            statement.setInt(4, phone_number);
            statement.setString(5, email);
            statement.setString(6, password);
            statement.setString(7, type);

            int rows = statement.executeUpdate() ;

            if (rows > 0){
                System.out.println("Shine hereglegchiin medeelel amjilttai nemegdleel");
            }
        } catch (SQLException ex){
            ex.printStackTrace();
        }

    }

}
```

Ажиллахаас өмнө:

Result Grid		Filter Rows:			Edit:		Export/Import:	
	id	first_name	last_name	phone_number	email	password	type	
▶	1	saruul	ganbold	90330000	raidensaruul@gmail.com	saruul123	user	
	2	undrah	ganbold	91102091	raiden@gmail.com	undrah123	user	
	3	jagaa	dummy	99725803	raidensa@gmail.com	raide123	admin	
✱	NULL	NULL	NULL	NULL	NULL	NULL	NULL	

Ажилласны дараа:

Problems @ Javadoc Declaration
 <terminated> DatabaseSystemTask [Java /
 Amjilttai update hiigdleee

Update query ажилласны дараа:

	id	first_name	last_name	phone_number	email	password	type
▶	1	saruul	ganbold	90330000	raidensaruul@gmail.com	saruul123	user
	2	undrah	ganbold	91102091	raiden@gmail.com	undrah123	user
	3	jagaa	dummy	99725803	raidensa@gmail.com	raide123	admin
	4	Taylor	Swift	91111234	raidenuul@gmail.com	raiden123	user
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

raidenuul@gmail.com цахим шуудантай хэрэглэгчийн овог, нэр болон утасны дугаарыг амжилттай update хийлээ.

DELETE Query:

raidenuul@gmail.com цахим шуудантай хэрэглэгчийн мэдээллийг устгана.

	id	first_name	last_name	phone_number	email	password	type
	1	saruul	ganbold	90330000	raidensaruul@gmail.com	saruul123	user
	2	undrah	ganbold	91102091	raiden@gmail.com	undrah123	user
	3	jagaa	dummy	99725803	raidensa@gmail.com	raide123	admin
	4	Taylor	Swift	91111234	raidenuul@gmail.com	raiden123	user
	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Query:

```
String email = "raidenuul@gmail.com" ;

try {
    Connection connection = DriverManager.getConnection(DB_URL, USER, PASS);

    String sql = "DELETE FROM user WHERE email = ?" ;

    PreparedStatement statement = connection.prepareStatement(sql) ;

    statement.setString(1, email);

    int rows = statement.executeUpdate() ;
    if (rows > 0){
        System.out.println("Amjilttai update hiigdleee");
    }
}
```

Query ажилласны дараа:

Result Grid		Filter Rows:		Edit:		Export/Import:	
	id	first_name	last_name	phone_number	email	password	type
▶	1	saruul	ganbold	90330000	raidensaruul@gmail.com	saruul123	user
	2	undrah	ganbold	91102091	raiden@gmail.com	undrah123	user
	3	jagaa	dummy	99725803	raidensa@gmail.com	raide123	admin
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

raidenuul@gmail.com цахим хаягтай хэрэглэгчийн мэдээлэл утсан байна.

SELECT QUERY:

```
SELECT p.*,b.*,c.*
FROM products AS p, brands AS b,category AS c
WHERE b.id = p.id AND p.id = 1 AND c.id = p.id;
```

Адилхан id тай бүтээгдхүүний брэндийн мэдээлэл, ангилалийн мэдээл мөн барааны ерөнхий мэдээллийг харуулсан.

```
try {
    Connection connection = DriverManager.getConnection(DB_URL, USER, PASS) ;

    Statement statement = connection.createStatement() ;

    String sql = "SELECT p.*,b.*,c.* FROM products AS p, brands AS b,category AS c WHERE
b.id = p.id AND p.id = 1 AND c.id = p.id" ;

    ResultSet result = statement.executeQuery(sql) ;

    while (result.next()) {
        String ResultData = "";
        for (int i = 1; i <= numColumn; i++) {
            if (i != numColumn)
                ResultData += result.getString(i) + ", ";
            else
                ResultData += result.getString(i);
        }

        System.out.println(ResultData);
    }
} catch (SQLException ex){
    ex.printStackTrace();
}
```

Query үр дүн:

id	name	description	supplier_id	price	brand_id	stock	category_id	discount	status	id	name	region	id	parent_id	category_name
1	intel - i5 12400F Boxed	very good cpu	2	750000	12	5	2	0	new	1	razer	chinese	1	99	mouse

Problems @ Javadoc Declaration Console

<terminated> DatabaseSystemTask [Java Application] C:\Program Files (x86)\Java\jre1.8.0_261\bin\javaw.exe (May 17, 2022, 12:19:05 PM)

1, intel - i5 12400F Boxed, very good cpu, 2, 750000, 12, 5, 2, 0, new, 1, razer, chinese, 1, 99, mouse