

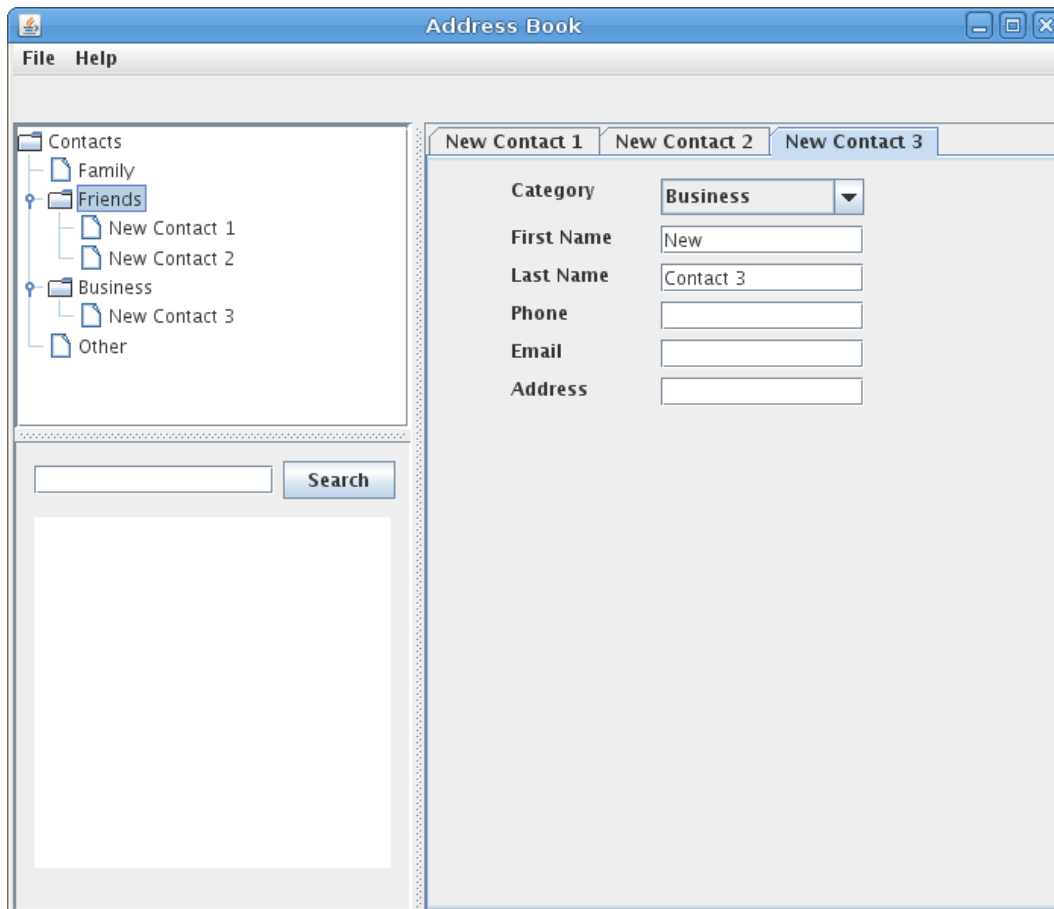
IN THE NAME OF GOD

In this assignment you are required to create an address book based on the 3-tier model. You are expected to reflect clear separation of each layer in your code. This application must be capable of:

1. Storing a number of *Contacts* in a database
2. Retrieving and displaying certain contacts to user identified by a unique number (i.e. id)

Take these points into consideration:

1. Assign the responsibilities of contact *insertion*, *removal*, *search* and *retrieval* to a database manager and leave the search part unimplemented for now. Don't forget to use static methods.
2. The only acceptable database server is MySQL. The easiest way is to get XAMPP from www.apachefriends.org. Use phpMyadmin for creating tables.
3. Your user interface should look something like:



4. Refer to this page if you faced difficulties in data access layer. Don't forget that you need to add Mysql JDBC Driver to your project first. In Netbeans, this can be achieved by clicking on “Add Library” under Libraries section of project properties.

For connecting to database using JDBC:

```
String db = "your db name";
String user = "root";
String pwd = ""; // default password for root is null
String url = "jdbc:mysql://localhost:3306/" + db;

try {
    Class.forName ("com.mysql.jdbc.Driver").newInstance ();
    Connection con = DriverManager.getConnection (url, usr, pwd);
    } catch (Exception e) {
        e.printStackTrace();
    }
}
```

For inserting new records:

```
String query = "INSERT INTO contacts (id, name, phone)
VALUES (2, Ali, 88987668 )";
Statement st = con.createStatement();
st.execute(query);
```

For retrieving fields:

```
String query = "SELECT * FROM contacts";
Statement st = con.createStatement();
ResultSet rs = st.executeQuery(query);

/* fetch columns one by one */
int id = rs.getInt("id");
String name = rs.getString("name");
String address = rs.getString("address");
```

When you are done, close the connection:

```
try{
    con.close();
} catch (SQLException e) {e.printStackTrace();}
```