

## Lab 13-2 Database Sample


After reading through the setup document, create a GUI that interacts with the MySQL database, as follows:



The screenshot shows a window titled "Address Form" with a standard Windows-style title bar (minimize, maximize, close buttons). The form contains several input fields arranged in two rows. The first row has fields for "ID", "First Name", "Last Name", and "SSN". The second row has fields for "Street", "City", "State", and "Zip". Below these fields is a large empty text area. At the bottom of the form are three buttons: "Search", "Save", and "Clear". All input fields are currently empty.

The GUI should work in the following ways (be sure that the database server is running):

### Search



This screenshot shows the "Address Form" window after the "ID" field has been populated with the value "1001". All other fields ("First Name", "Last Name", "SSN", "Street", "City", "State", "Zip") remain empty. The "Search", "Save", and "Clear" buttons are still present at the bottom.

Clicking the Search button should read the ID field and then execute a SELECT statement, attempting to read data for a PERSON with specified ID and corresponding ADDRESS. If found, the fields in the window should be populated.



This screenshot shows the "Address Form" window after a successful search. All input fields are now populated with data: "ID" is "1001", "First Name" is "John", "Last Name" is "Smith", "SSN" is "555882121", "Street" is "10 Adams St.", "City" is "Fairfield", "State" is "IA", and "Zip" is "52556". Below the input fields, a red text label "Record found" is displayed. The "Search", "Save", and "Clear" buttons remain at the bottom.

If not found, the string “No records found” should appear in the Status field.



The screenshot shows a window titled "Address Form" with a blue header bar. It contains several input fields: ID (with "2000" entered), First Name, Last Name, and SSN. Below these are Street, City, State, and Zip fields. A status bar at the bottom displays the text "No records found" in red. At the very bottom are three buttons: "Search", "Save", and "Clear".

### Save

Clicking the Save button should save the data in the fields displayed.

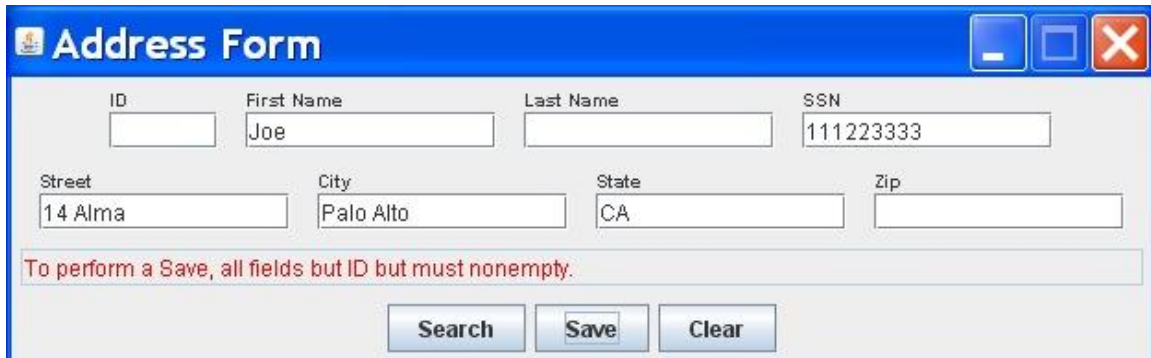


The screenshot shows the "Address Form" window with data entered in the fields: ID is empty, First Name is "Donald", Last Name is "Trump", and SSN is "999004444". The Street field contains "1 Bigstreet", City is "New York", State is "NY", and Zip is "21123". The status bar is empty. The "Search", "Save", and "Clear" buttons are at the bottom.



The screenshot shows the "Address Form" window with the same data as the previous one. The status bar now displays the text "Database has been updated." in red. The "Search", "Save", and "Clear" buttons remain at the bottom.

If even just one field is empty, the program will not attempt to save, but will instead put a message “All fields must be nonempty” in the status field.



The screenshot shows a window titled "Address Form" with a blue title bar. It contains several text input fields: ID (empty), First Name (Joe), Last Name (empty), SSN (111223333), Street (14 Alma), City (Palo Alto), State (CA), and Zip (empty). Below the fields, a red error message reads: "To perform a Save, all fields but ID but must nonempty." At the bottom are three buttons: Search, Save, and Clear.

## Clear

The Clear button should empty every field.



The screenshot shows the same "Address Form" window, but all input fields are now empty. The error message is no longer present. The Search, Save, and Clear buttons remain at the bottom.

Helpful Hint: When reading and saving data to the database, you will need to know exact column names. Using the client (run client.bat), you can find this information for, say, PERSON, by typing  
describe PERSON;