

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 blue header bar. Below the header, there are eight text input fields arranged in two rows. The first row contains fields for "ID", "First Name", "Last Name", and "SSN". The second row contains fields for "Street", "City", "State", and "Zip". All fields are currently empty. At the bottom of the form, there are three buttons: "Search", "Save", and "Clear".

The GUI should work in the following ways (be sure that the database server is running and that derbyclient.jar has been added to the project):

Search



The screenshot shows the "Address Form" window with the "ID" field populated with the value "1001". The 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.



The screenshot shows the "Address Form" window with all input fields populated. The "ID" field contains "1001", "First Name" contains "John", "Last Name" contains "Smith", "SSN" contains "555882121", "Street" contains "10 Adams St.", "City" contains "Fairfield", "State" contains "IA", and "Zip" contains "52556". Below the input fields, a message box displays the text "Record found" in red. The "Search", "Save", and "Clear" buttons are still present 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 red message "No records found" is displayed in the status area. At the bottom are three buttons: "Search", "Save", and "Clear".

ID	First Name	Last Name	SSN
2000			

Street: City: State: Zip:

No records found

Search Save Clear

Save

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



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

ID	First Name	Last Name	SSN
	Donald	Trump	999004444

Street: 1 Bigstreet City: New York State: NY Zip: 21123

Search Save Clear



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

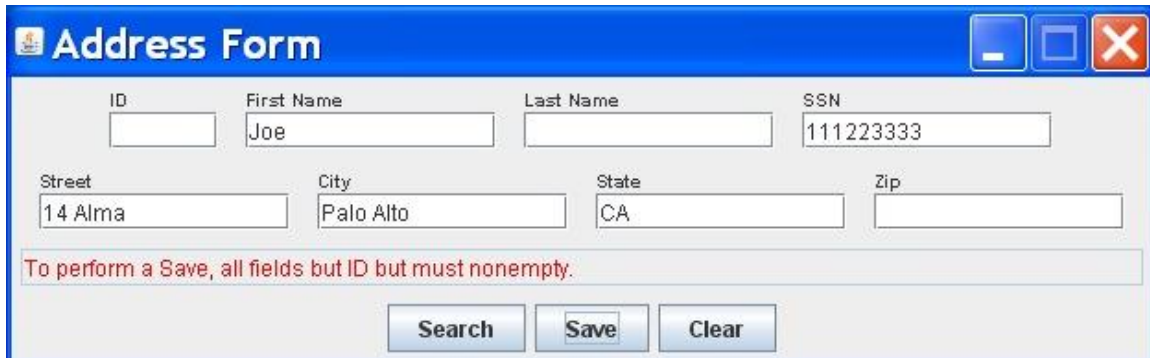
ID	First Name	Last Name	SSN
	Donald	Trump	999004444

Street: 1 Bigstreet City: New York State: NY Zip: 21123

Database has been updated.

Search Save Clear


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 Java Swing window titled "Address Form". 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 JavaDB 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;