INSY 4306 ADVANCED SYSTEMS DEVELOPMENT ASSINGMENT -4

20 points

1. INSTRUCTIONS

- For the late submissions, 5% of the total points will be deducted per hour automatically on Canvas.
- You can only use the techniques that you have learned so far. Other techniques will not be accepted. For other techniques, 10 pts will be deducted.
- You can drag and drop components. In this assignment, you can use a .java form.
- In this assignment, upload the following file:
 - YourFirstNameYourLastName.zip /.rar [including AddressScreen.java, AddressScreen.form (if you use a Java form), Database.java, AddressOptions.java, Address.java]
- Each question is **independent** of each other.
- Do not forget to add comments to explain how your codes are working! Short comments are acceptable.
- Write your codes individually! Do not copy of any of them from someone else!
- NOTE: If you are using any IDE (Netbeans, Eclipse, etc.), please delete the statement package xxxxx; (and save it again), from your application.

 Otherwise, I will get a compilation error, and you will lose 1 pt for each file giving a compilation error. It is your responsibility.

2. GRADING POLICY

• Case 1:

- For each question:
- o I will compile your .java files. <u>If any compilation error occurs, 1 pt</u> will be deducted from each file including compilation errors.
- After that, I will check your algorithms whether they are correct or not.
 For example; if it says find odd and even numbers. I will check whether it really finds both even and odd numbers. This part will be evaluated based on your work.
- You can only use the techniques that you have learned so far. Other techniques will not be accepted. <u>For other techniques</u>, <u>10 pts will be</u> <u>deducted</u>.
- Do not drag and drop components. <u>It is not acceptable. You will get 0</u> point.
- o Additionally, comments will be checked whether they clearly and briefly explain what you have done. <u>If comments are missing or not clear</u>, enough, or brief 1 pt will be deducted.

• <u>Case 2:</u>

- o For each question:
- o If there is not any compilation error:
 - I will try each case scenario as stated in each question. For example; if it says find odd and even numbers. I will try both even and odd numbers. This part will be evaluated based on your work.
 - You can only use the techniques that you have learned so far. Other techniques will not be accepted. <u>For other techniques</u>, <u>10 pts will</u> <u>be deducted</u>.
 - Additionally, comments will be checked whether they clearly and briefly explain what you have done. <u>If comments are missing or</u> not clear, enough, or brief 1 pt will be deducted.

• Case 3:

o If you do not upload a .java file, I will not evaluate your answer.

• Case 4:

o <u>If it is determined that you copy the codes from someone else, you will get 0 pt.</u>

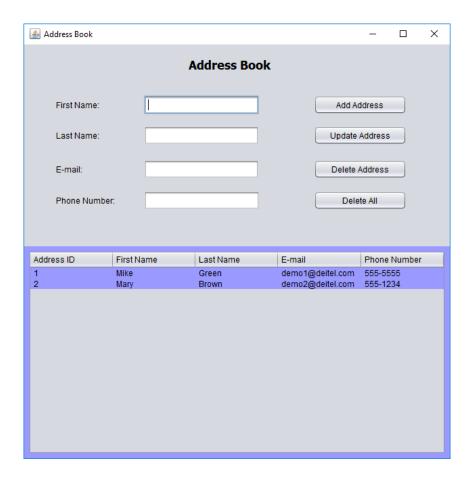
QUESTIONS

Note: In each question, assume that the user enters correct inputs. You can drag and drop components.

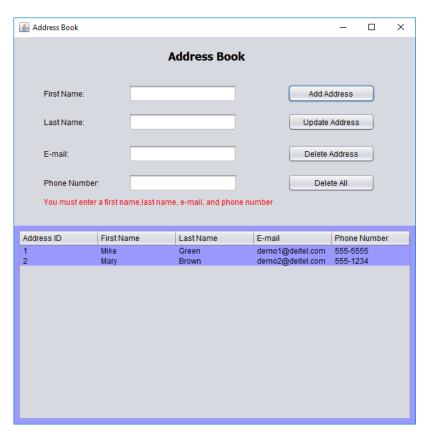
- 1. Write a simple Address Book application. (20 pts).
 - a. Use addressbook.sql to set up a database. **Your database name will be: addressbook**.
 - b. Your path must be: jdbc:derby://localhost:1527/addressbook
 - c. your database username will be: uta and database password will be: 12345

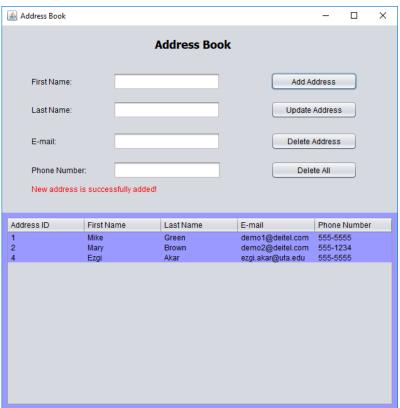
NOTE: If you get the error of no suitable driver found for derby, please refer to the document "Java DB Setup- Troubleshooting Section"

- d. Create a database class to keep related instance variables of your database.
- e. Create an address class to keep related instance variables for an address. Add a constructor and set and get methods.
- f. Create an AddressOptions class to keep all related methods.
- g. Create a Java form which will be AddressScreen. (You can prefer to create .java file instead of a java form. Then, you will not upload a java form. However, when you create a java form, Netbeans also creates a .java file for you under the source folder. So, you will upload both.)
- h. You will have 6 Jlabels, 4 JTextFields, 1 JTable, and 4 JButtons. Check the figure below.
- i. Title will be "Address Book".
- j. In one of the labels, display a title which is "Address Book".
- k. When the program runs, in the table, you must list all related data. If the table is blank, do not display any row.
- 1. Cells must not be editable and resizable.
- m. JTable must displayed in a JPanel.
- n. Set a different background color for your JPanel.

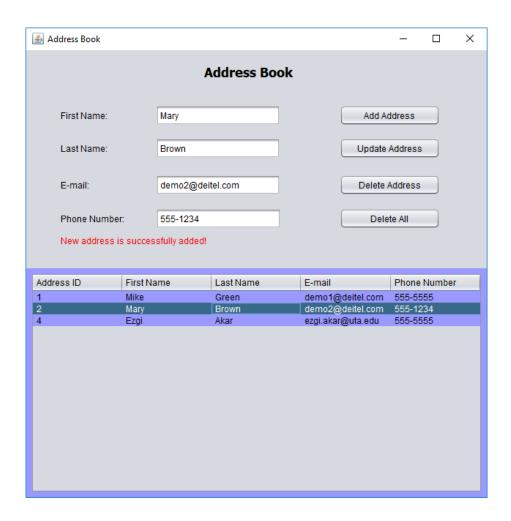


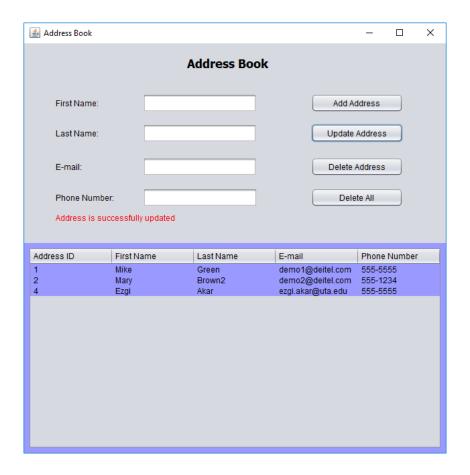
- o. A user fills first name, last name, e-mail, and phone number to add an address, and then click "add address" button. If any text field is blank, you will display a message that the user must supply all related values.
- p. If text fields do not include any null value, a new address will be added, all data including new one, will be listed in the table. All text fields will be cleared. You will also display a message that the address is added successfully. See the figures below.





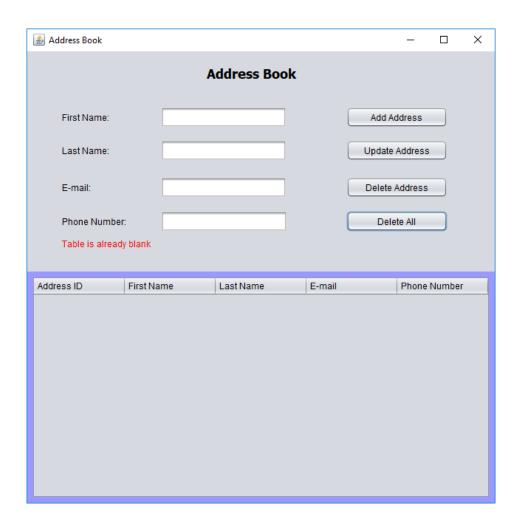
- q. To update an address, the user must select a row and the table is not blank. You must control them and display a message that the table is blank, or a row is not selected. When a user clicks on a row, address details will be displayed in the related text fields. See the figures below.
- r. The user updates values in any text field and then clicks "Update Address". Then, the address is updated.
- s. When an address is updated, you must clear the text fields. You must display a message that the address is updated successfully. You must list updated version of the data in the table.





- t. To delete an address, the user must select a row and the table is not blank. You must control them and display a message that the table is blank, or a row is not selected. When a user clicks on a row, address details will be displayed in the related text fields. See figures below.
- u. When an address is deleted, you must clear the text fields. You must display a message that the address is deleted successfully. You must list updated version of the data in the table.
- v. If the user clicks "Delete All" button, you will delete all data in the table and a blank table will be listed. Also, display a message that all addresses are deleted successfully. However, if the table is already a blank table, you will display a message that the table is blank. Check the figures below.





w. Change the icon of your JFrame. Use the icon provided to you. In this assignment, it is your responsibility to learn how to change an icon of a JFrame component.

