



Assignment 2

Course	Software Construction and Development
Instructor	Sir Rana Waqas
Due Date	
Section	BSE-5B & BSE-5C

Important Guidelines:

1. Copying assignments from others is strictly prohibited. If an assignment shows more than 20% similarity to any source (the maximum allowable limit), it will result in a score of zero for both current and previous assignments.
2. Submit your assignment on time. Late submissions will incur a 25%-mark deduction if submitted within 6 hours, a 50%-mark deduction if submitted within 24 hours, and submissions beyond 24 hours will result in a score of zero.
3. No marks will be awarded to individuals who do not submit the file on Google Classroom (GCR).
4. Only submit your Java files in a zipped folder. First, place all Java files in a single folder (do not create any subfolders), rename the folder with your roll number, then zip it. **Failure to follow this format will result in a score of zero.**

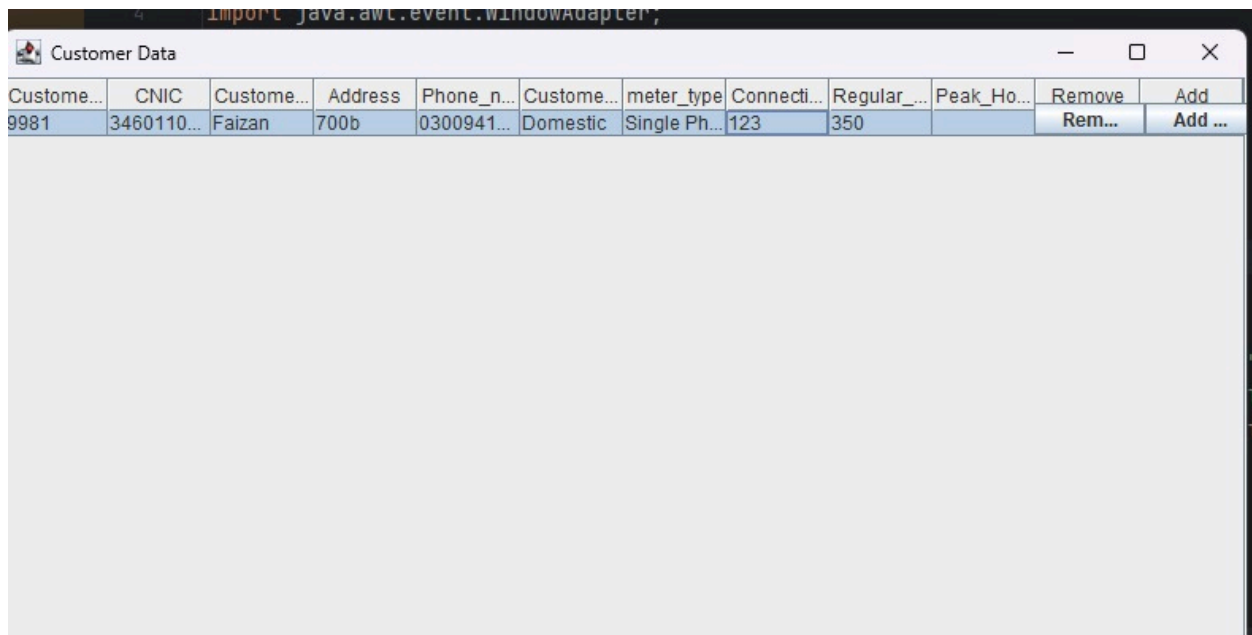
Assignment Requirements:

The LESCO System Design developed by FAST students in previous assignments has been performing well, and LESCO has encountered no issues so far. However, due to advancements in technology and modernization, LESCO now wants to transition from a CLI (Command Line Interface) to a GUI (Graphical User Interface). For this phase, you are only required to add a GUI to your existing system; no modifications to the existing functionality are necessary.

Required Changes:

1. LESCO Employees can view all files except for the Employee Data file.
2. Add a fully functional Search bar which searches the data in table as soon as the text in search bar changes
3. Display all files related to billing, customers, NADRA, (excluding LESCO employee data), etc., in a table format.
4. The table should include two additional columns with functional buttons, "Update" and "Delete," which will allow users to update or delete data as appropriate.
5. Only the most recent month's bill is editable (e.g., if it's October and the October bill is not yet generated, then the September bill can be updated, otherwise, it cannot). The same restriction applies to deleting bills.
6. Files associated with NADRA should only be editable; no deletions are permitted.
7. The TaxTrif file is only updatable, and deletion of entries is not allowed.
8. You have full creative freedom in designing the GUI. Points will be awarded based on usability, maintainability, and functionality. A well-designed interface will result in a higher score.

Sample Table:



The screenshot shows a Java Swing window titled "Customer Data" with a standard title bar (minimize, maximize, close buttons). The window contains a table with the following columns: Customer ID, CNIC, Customer Name, Address, Phone Number, Customer Type, Meter Type, Connection Number, Regular Bill Amount, Peak Hour Bill Amount, Remove, and Add. The first row of data shows a customer with ID 9981, CNIC 3460110..., Name Faizan, Address 700b, Phone 0300941..., Domestic meter type, Single Phase connection, 123 regular bill, and 350 peak hour bill. The Remove and Add buttons are labeled "Rem..." and "Add ..." respectively.

Customer...	CNIC	Customer...	Address	Phone_n...	Customer...	meter_type	Connecti...	Regular_...	Peak_Ho...	Remove	Add
9981	3460110...	Faizan	700b	0300941...	Domestic	Single Ph...	123	350		Rem...	Add ...

You can change the table design if you want but buttons (remove, update) are necessary.