Person-Student Management System

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1st Year 2nd Term

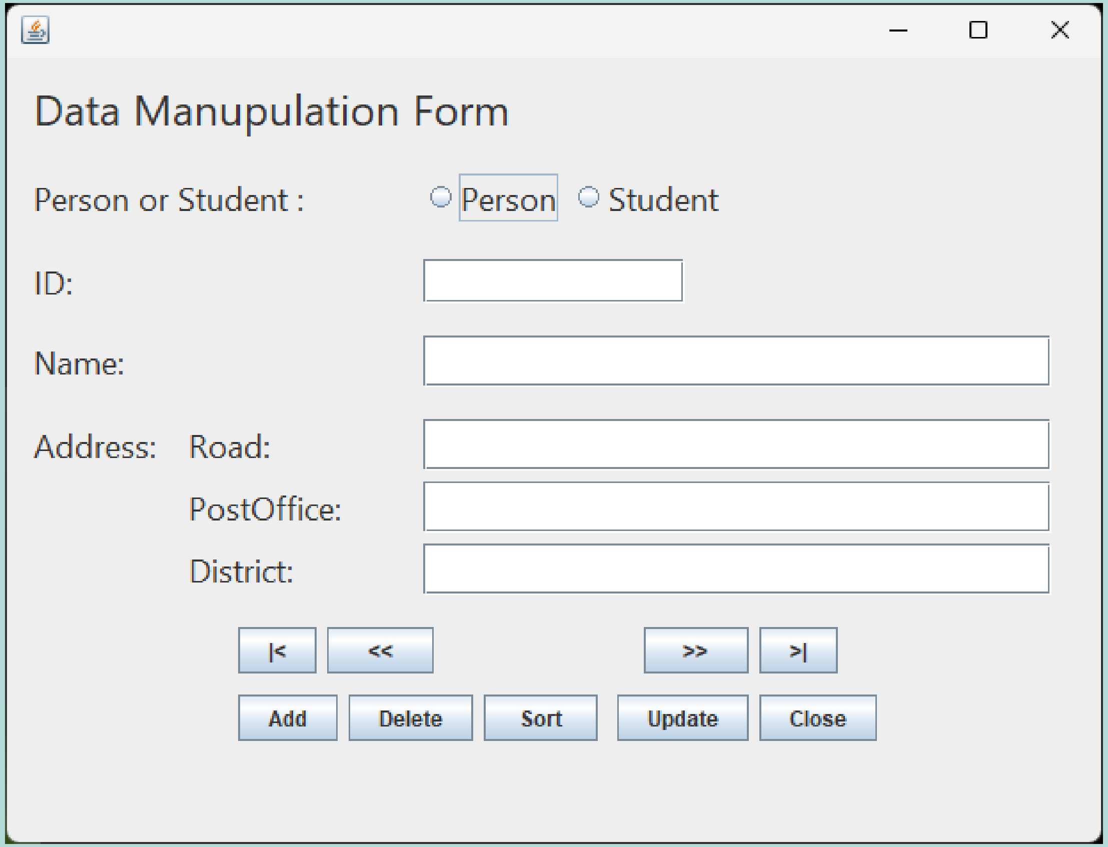
Computer Science and Engineering Discipline

Khulna University, Khulna.

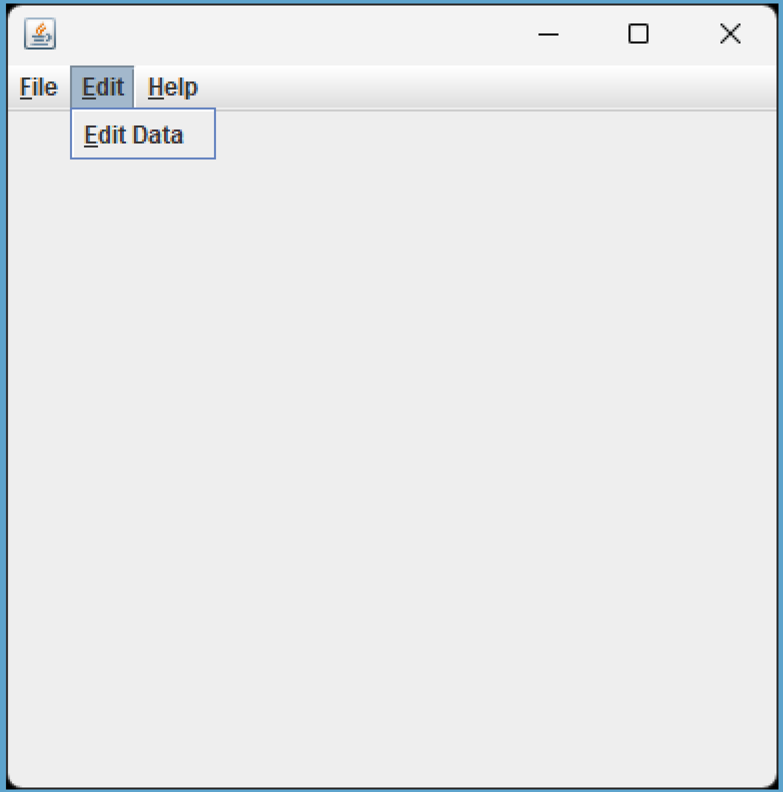
Project: Person-Student Management System

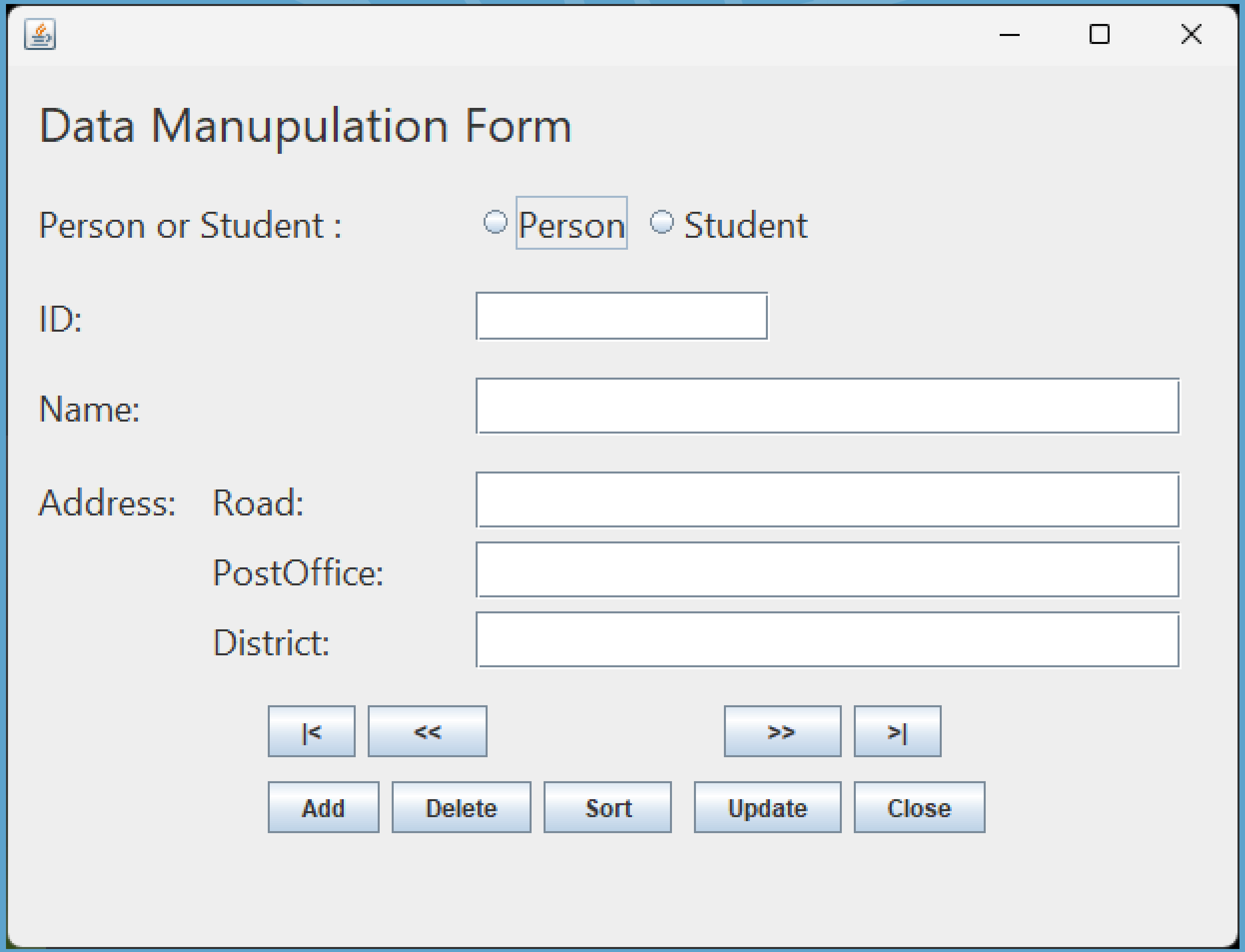
Features:

- Add, Delete or Update Person or Student Information
- Sort alphabetically in ascending order
- Save to local memory
- Automatic load from local memory
- Simple and User-friendly UI



Project Demonstration




Data Manupulation Form

Person or Student : ○ Person ○ Student

ID:

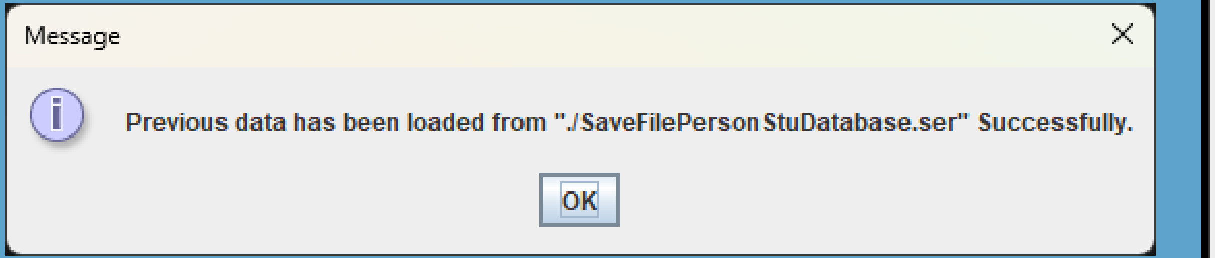
Name:

Address: Road:

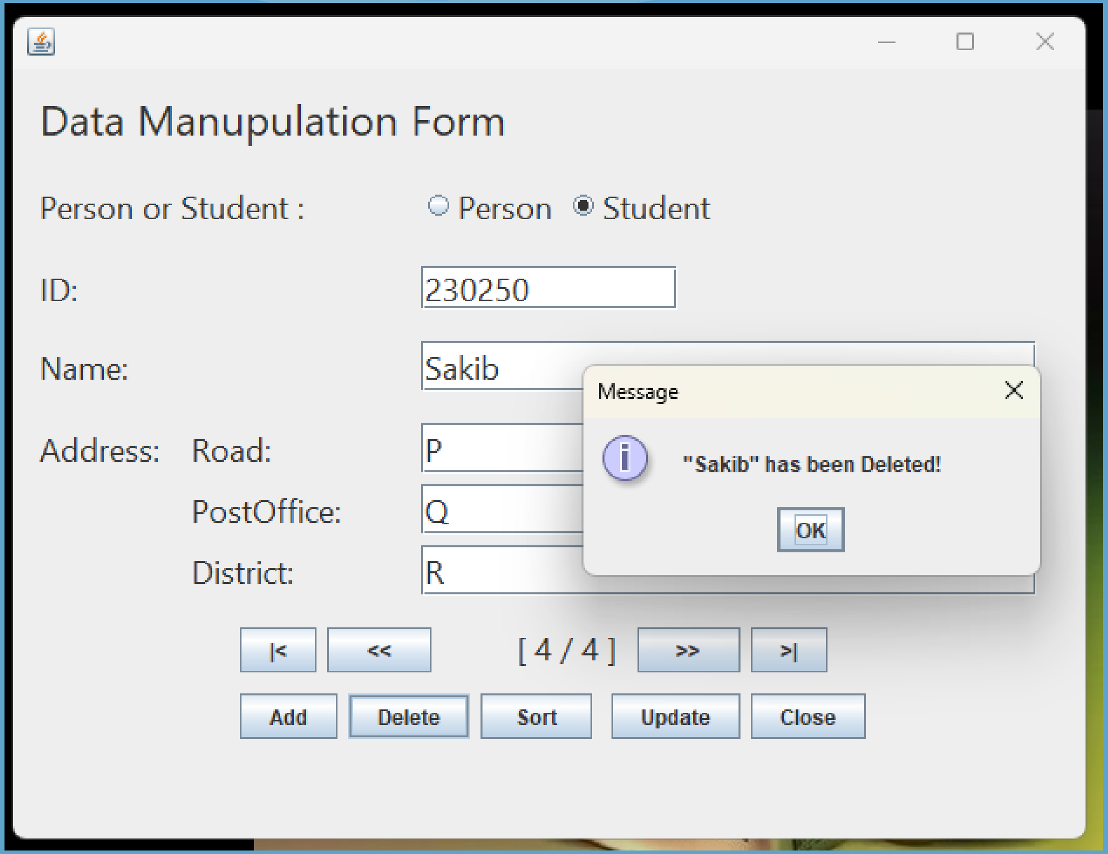
PostOffice:

District:

Project Demonstration



Previous data has been loaded from "./SaveFilePerson StuDatabase.ser" Successfully.



Data Manupulation Form

Person or Student : ○ Person ● Student

ID: 230250

Name: Sakib

Address: Road: P

PostOffice: Q

District: R

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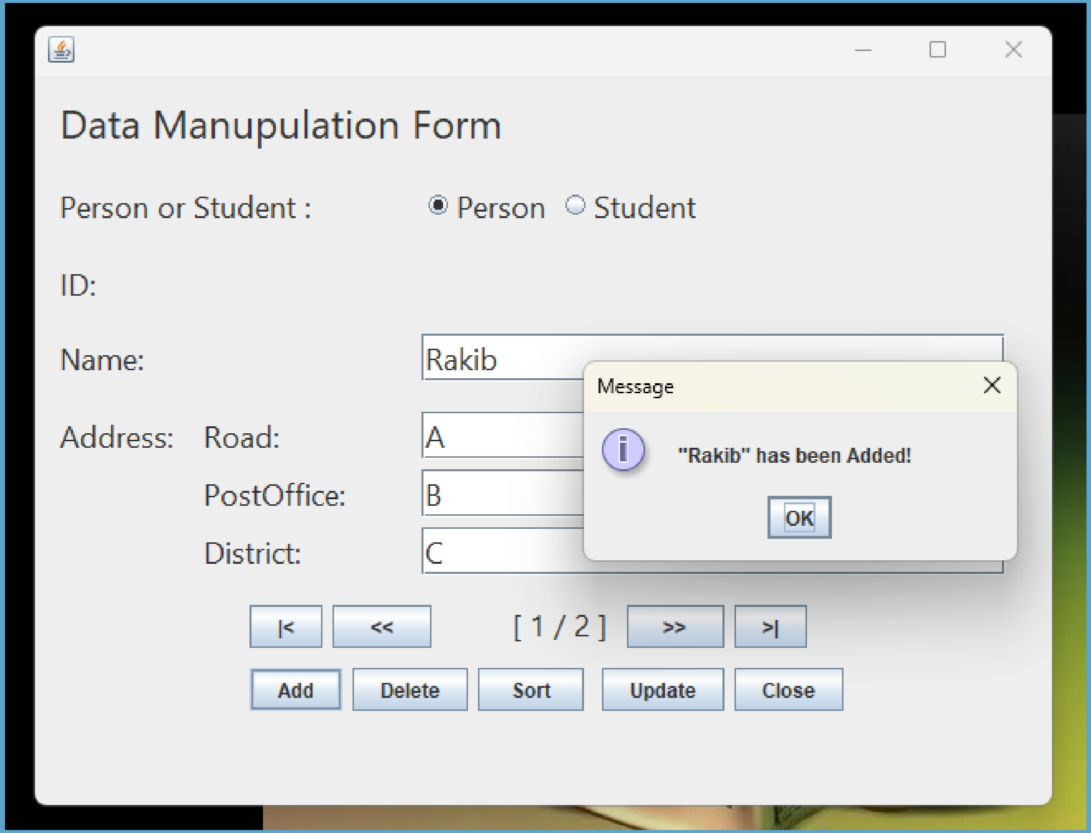
"Sakib" has been Deleted!

Project Demonstration



Data Manupulation Form

Person or Student : ● Person ○ Student

ID:

Name: Rakib

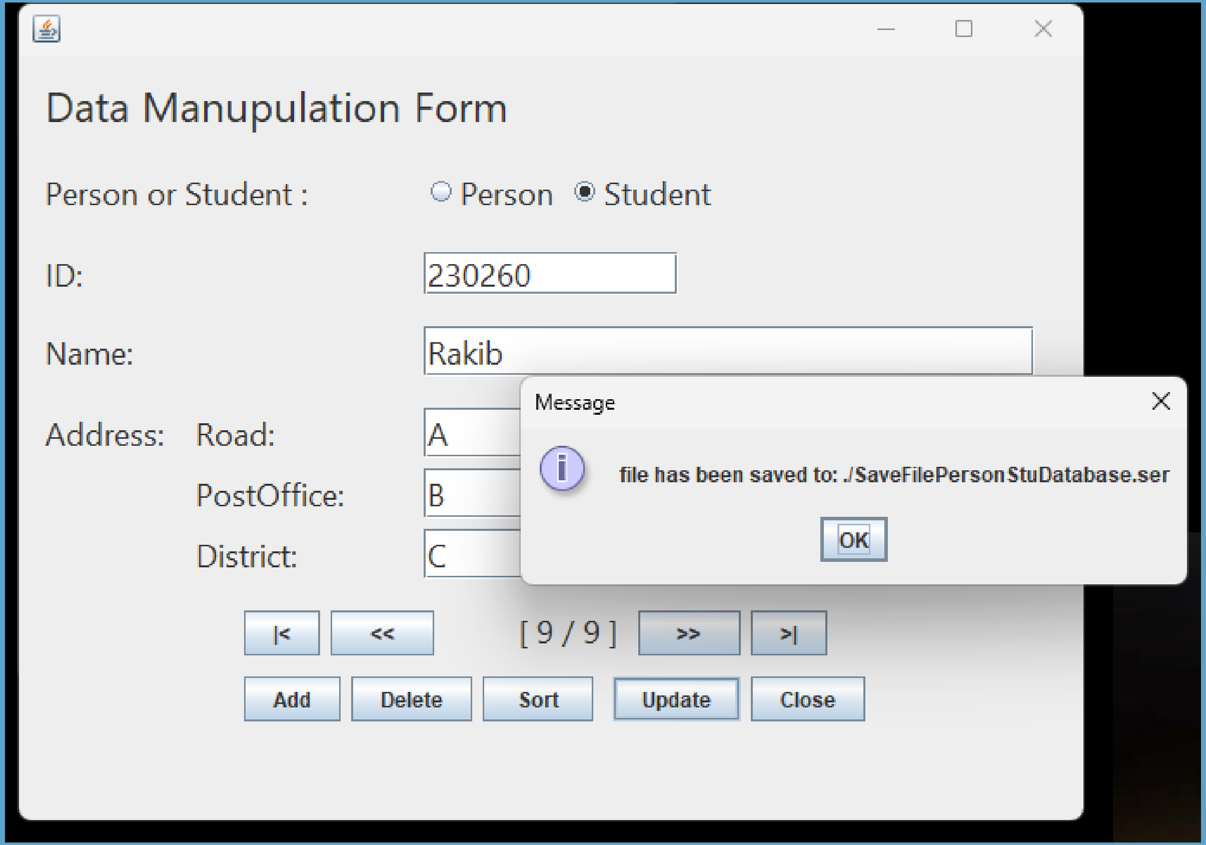
Address: Road: A

PostOffice: B

District: C

Message

"Rakib" has been Added!



Data Manupulation Form

Person or Student : ○ Person ● Student

ID: 230260

Name: Rakib

Address: Road: A

PostOffice: B

District: C

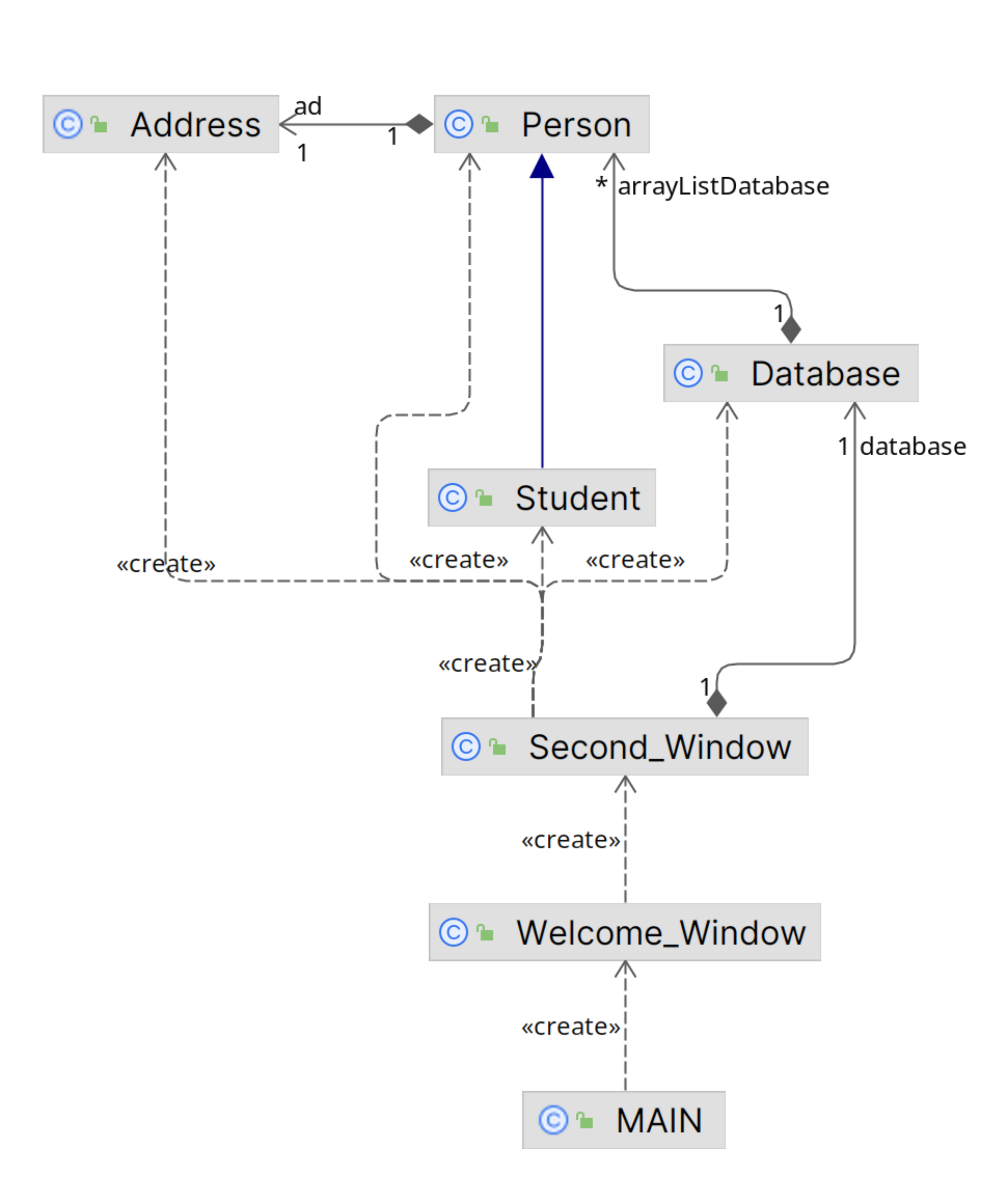
Message

file has been saved to: ./SaveFilePersonStuDatabase.ser

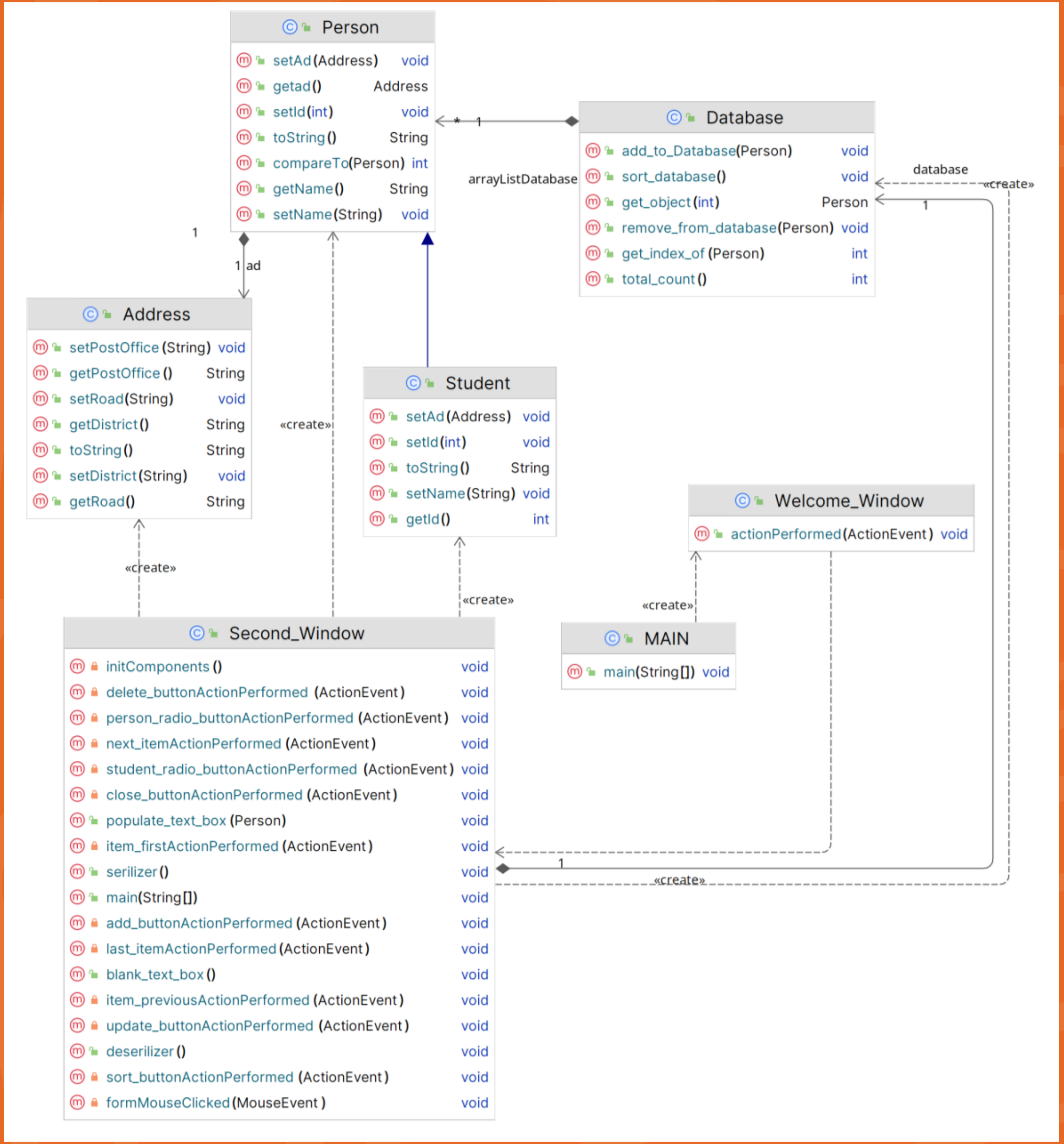
Step by Step Procedure

- Raugh Drawing of UI Interface to determine necessary Swing components
- Drawing UML Class Diagram according to requirement
- Writing Basic Classes (Address, Person, Student, Database, …) as running back-end side
- Drag and Drop GUI Components to design User Interface (UI)
- Defining instructions(code) for GUI components in respective code blocks
- Implement ActionListener Interface
- Implement Serialization and Deserialization
- Testing and Bug Fixing
- Export to executable JAR file

UML Class Diagram



UML Class Diagram (methods only)



Person

setAd(Address)	void
getad()	Address
setId(int)	void
toString()	String
compareTo(Person)	int
getName()	String
setName(String)	void

Database

add_to_Database(Person)	void
sort_database()	void
get_object(int)	Person
remove_from_database(Person)	void
get_index_of(Person)	int
total_count()	int

Address

setPostOffice(String)	void
getPostOffice()	String
setRoad(String)	void
getDistrict()	String
toString()	String
setDistrict(String)	void
getRoad()	String

Student

setAd(Address)	void
setId(int)	void
toString()	String
setName(String)	void
getId()	int

Welcome_Window

actionPerformed(ActionEvent)	void

MAIN

main(String[])	void

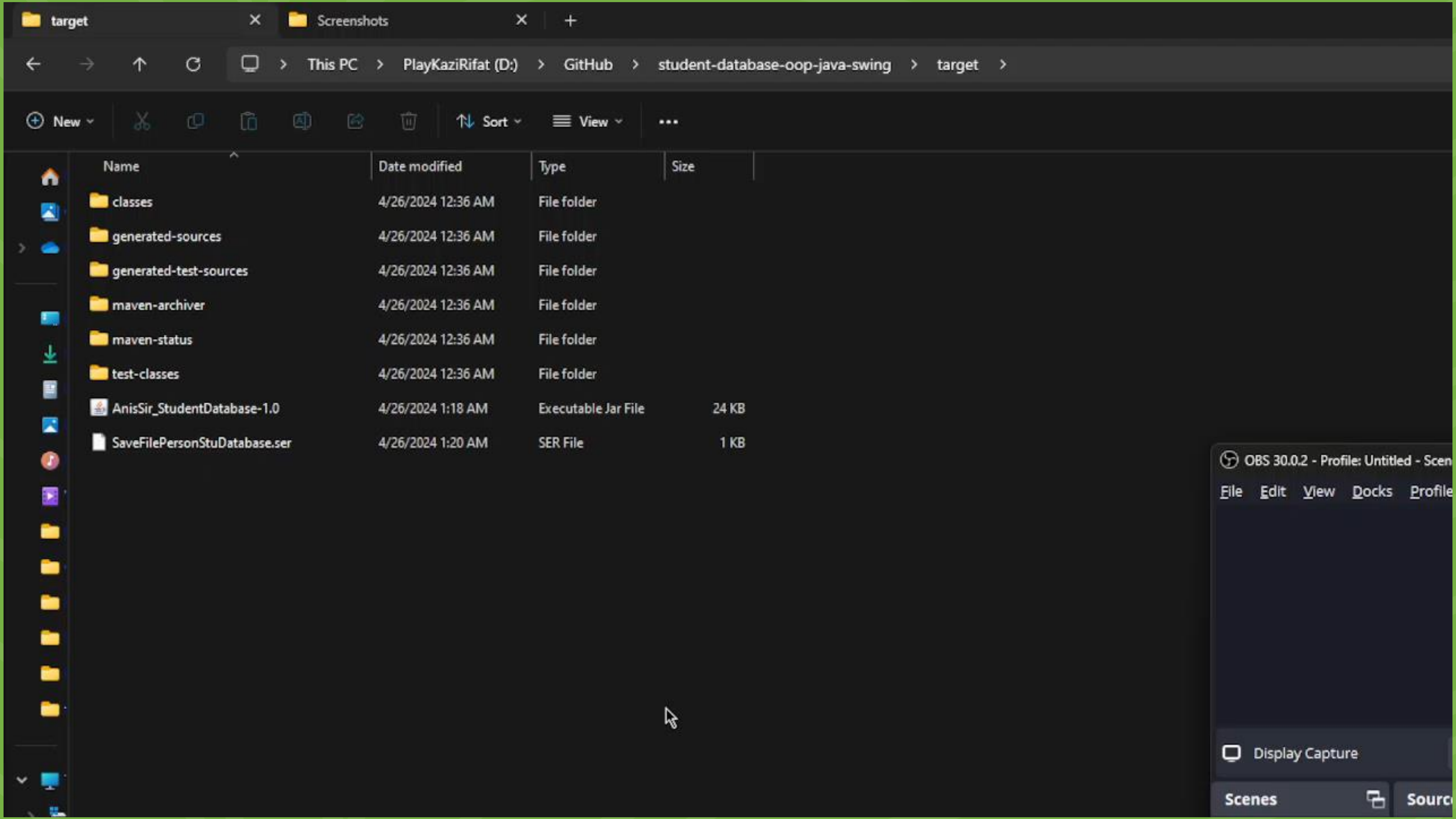
Second_Window

initComponents()	void
delete_buttonActionPerformed(ActionEvent)	void
person_radio_buttonActionPerformed(ActionEvent)	void
next_itemActionPerformed(ActionEvent)	void
student_radio_buttonActionPerformed(ActionEvent)	void
close_buttonActionPerformed(ActionEvent)	void
populate_text_box(Person)	void
item_firstActionPerformed(ActionEvent)	void
serilizer()	void
main(String[])	void
add_buttonActionPerformed(ActionEvent)	void
last_itemActionPerformed(ActionEvent)	void
blank_text_box()	void
item_previousActionPerformed(ActionEvent)	void
update_buttonActionPerformed(ActionEvent)	void
deserilizer()	void
sort_buttonActionPerformed(ActionEvent)	void
formMouseClicked(MouseEvent)	void

Essential Swing Components

- JFrame: JFrame represents a window on the screen and holds all the other GUI components.
- JLabel: JLabel displays a text or image on the screen.
- JButton: Jbutton is a clickable button that triggers an action when pressed.
- JMenuBar: JMenuBar is a horizontal bar that holds multiple JMenu objects and appears at the top of the JFrame by default.
- JMenu: An individual menu within a menu bar. It holds a list of menu items.
- JRadioButton: A button that represents selection of one option from a set of choices.
- JTextField: JTextField is a component used in Java Swing to allow users to input or edit a single line of text.

Project Demonstration (Video)


target
Screenshots
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New
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Name	Date modified	Type	Size
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generated-sources	4/26/2024 12:36 AM	File folder	
generated-test-sources	4/26/2024 12:36 AM	File folder	
maven-archiver	4/26/2024 12:36 AM	File folder	
maven-status	4/26/2024 12:36 AM	File folder	
test-classes	4/26/2024 12:36 AM	File folder	
AnisSir_StudentDatabase-1.0	4/26/2024 1:18 AM	Executable Jar File	24 KB
SaveFilePersonStuDatabase.ser	4/26/2024 1:20 AM	SER File	1 KB

Questions & answers

Thank you very much