MINISTRY OF EDUCATION
IMAM ABDULRAHMAN BIN
FAISAL UNIVERSITY
COLLEGE of COMPUTER SCIENCE
& INFORMATION TECHNOLOGY

وزارة التعليم
جامعة الإمام
عبدالرحمن بن فيصل
كلية علوم الحاسب
وتقنية المعلومات

قسم علوم الحاسب
Department of Computer Science

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CSC236: Object Oriented Programming (2)

Traveling Booking System

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1. Application's Interface Design:

1.1 Full Application Interfaces and Interactions:

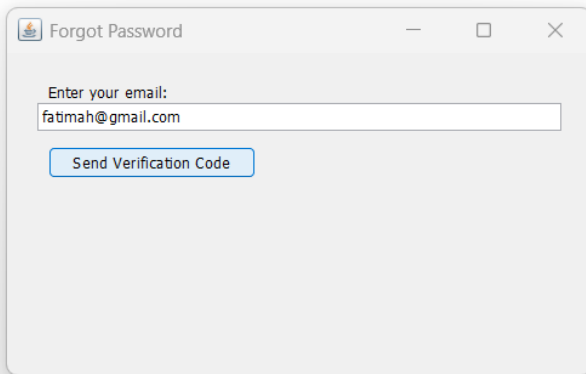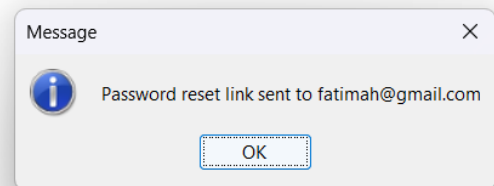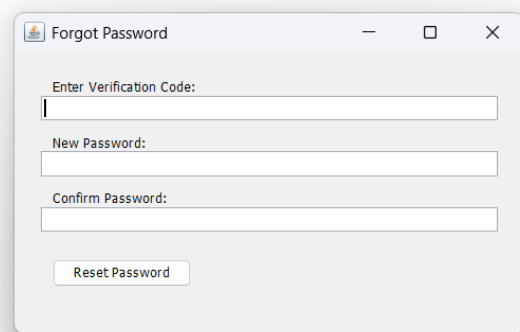| **Welcome Interface** |
|:---:|
| |
| This is the first interface that appears when the user opens the Traveling Booking . It will clearly guide users to the features they need based on their intended tasks. The interface shows an image of a bus and a train which is the logo. "WELCOME TO OUR TRAVELING BOOKING SYSTEM!"

 • Login as Passenger:
 This button allows the user to navigate to the Passenger Login Interface. This will take the normal users to their booking services.
 • Login as Admin:
 This button takes the user to the Admin Login Interface, The Admin Login Interface is meant for the Admins of the system and those on the staff. |

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Passenger Login Interface

This interface is exclusive to the passengers, so they can log in. Passengers can enter their credentials to take them to the area of their booking account.

• Email: This is the field where the user can write their email that they are registered to.

• Password: This is a secure field for users to enter their password without showing the characters.

• Login: This button, when clicked, will have the system check the information entered and redirect the user to Passenger Dashboard.

• Forgot password?: If the user forgot the password, this will help the user recognize their password again.

• Register: For those who are new and do not have an account, clicking this will take the user to the register interface where a new account can be created.

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Forgot Password Interface

When a passenger forgets their password, they should arrive on this page and will be taken through a guided process to reset their password and access their account.

Step 1: Request Reset
• There is a field that reads "Enter your email:", where the user will enter in the email they used to register(e.g. fatimah@gmail.com).
• When the user clicks the "Send Verification Code" button, the system will auto generate an instruction for that user and email it to them.

Once completed, a small message will show : "Password reset link sent to [email]." When the user clicks OK, that verifies the message and advances them to the next step.

Step 2: Reset Password
The other half of the interface
In this step the User will :
• Enter the verification code they received.
• Then type in their new password, and confirm the new password in the field below.
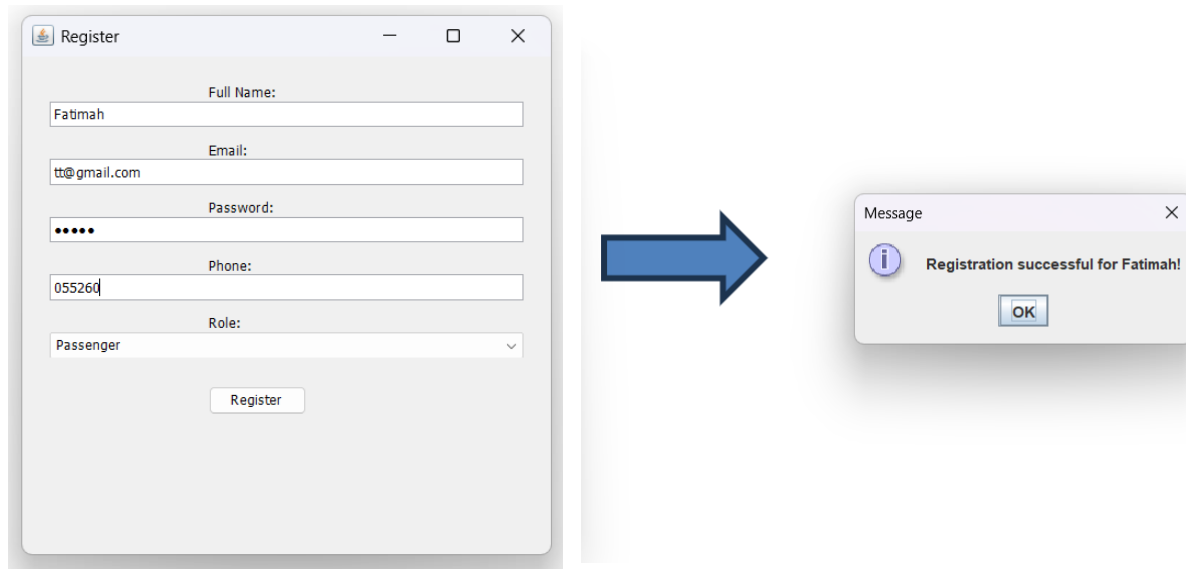
Finally, by clicking the "Reset Password" button, their new password will update, if any of the inputs are invalid, then the new password will not save.

Register Interface

This is the quick entry point for new passengers to create an account and start booking right away.

Registration Form
- Full Name: Only letters allowed (e.g., Fatimah).
- Email: Must follow proper format (e.g., tt@gmail.com).
- Password: Secure field with optional strength meter.
- Phone: Numbers only; letters trigger an error.
- Role: Set to Passenger by default (non-editable).
- Register : this Button Validates info and creates the account.

Success Message

"Registration successful for [Name]!"
Clicking ok redirects to login or dashboard.

Passenger Dashboard Interface
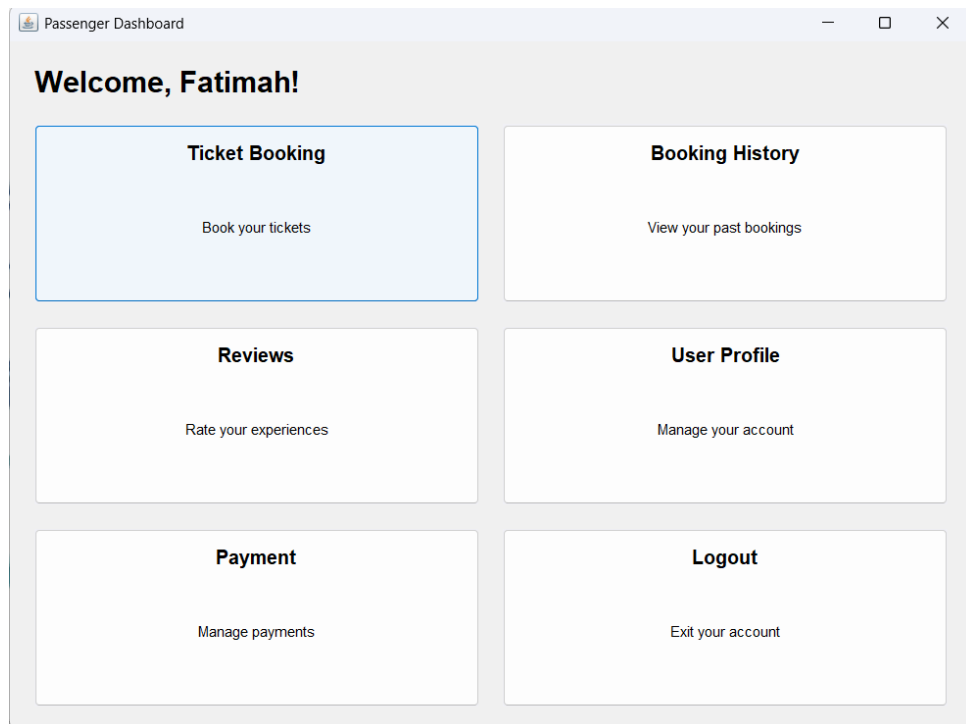
Once logged in, passengers Dashboard will appear from booking new trips to reviewing old ones.

1. Ticket Booking: Book your tickets and opens the ticket booking interface.
2. Booking History: View your past bookings and shows previous trips.
3. Reviews: Rate your experiences and takes you to a feedback area.
4. User Profile: Manage your account and Lets you update your personal info.
5. Payment: Manage payments and pay for the ticket.
6. Logout: Exit your account and logs you out of the system.

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Ticket Booking Interface

This interface guides passengers through a smooth and clear ticket booking process. Whether choosing a bus or train, users can select routes, pick times, and confirm bookings with real-time updates.

Booking Form:
1. Travel Type: Choose your preferred mode whether Bus or Train.
2. Route Selection:
    o   Departure Station: Pick from a dropdown point.
    o   Arrival Station: Select where you're going next.
3. Date & Time: select the travel date and suitable departure time.
4. Ticket Details:
    o   Quantity: Number of tickets needed.
    o   Type: Choose Standard or VIP.
5. Pricing: In the Total Amount it will auto-updated based on selected options.

6. Confirm Booking: Submits the form, processes payment, and then it will display Confirmation with Success message ("Booking successful!").

Payment Interface

This interface ensures passengers can securely complete their ticket purchase using either cash or credit cards.
 	
Payment Form:
    1. National ID
    2. Payment Method
    3. Payment Amount
    4. Card Details
       o Card Number: Enter 16-digit number with auto-spacing.
       o Expiry: (MM/YY) Masked date field for expiration.
       o CVV: 3-digit field for added security.
       o Name: Full name as printed on the card.

Booking History Interface

This interface presents passengers with a clear, organized view of all their travel bookings making it easy to stay informed, manage trips, or reference booking details when needed.
 	
Bookings Table:
    1. Booking ID
    2. Travel Type
    3. Route: with Departure Station and Arrival Station.
    4. Date
    5. Time
    6. Quantity
    7. Ticket Type
    8. Total Amount

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Reviews Interface

A simple interface where users can write reviews and read others' feedback
1. review Submission: Invites users to share their thoughts
2. Comment Box: Text area to Share your experience
3. Star Rating: from 1 star to 5 stars
4. Submit Button: posts the review after validation
5. Reviews Display

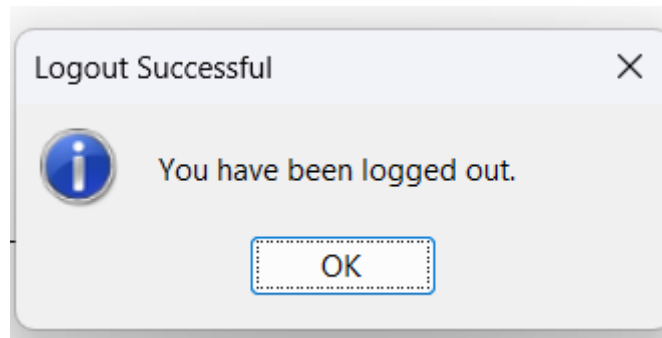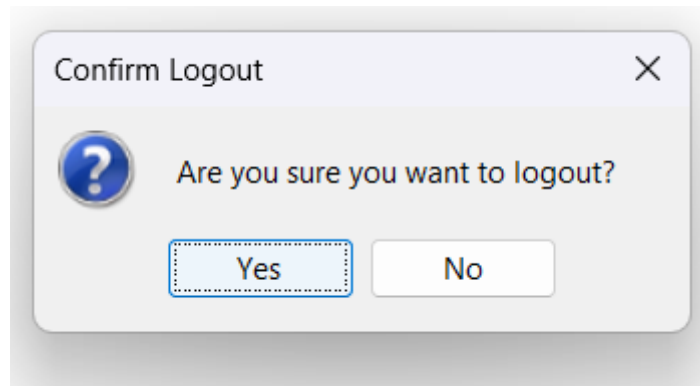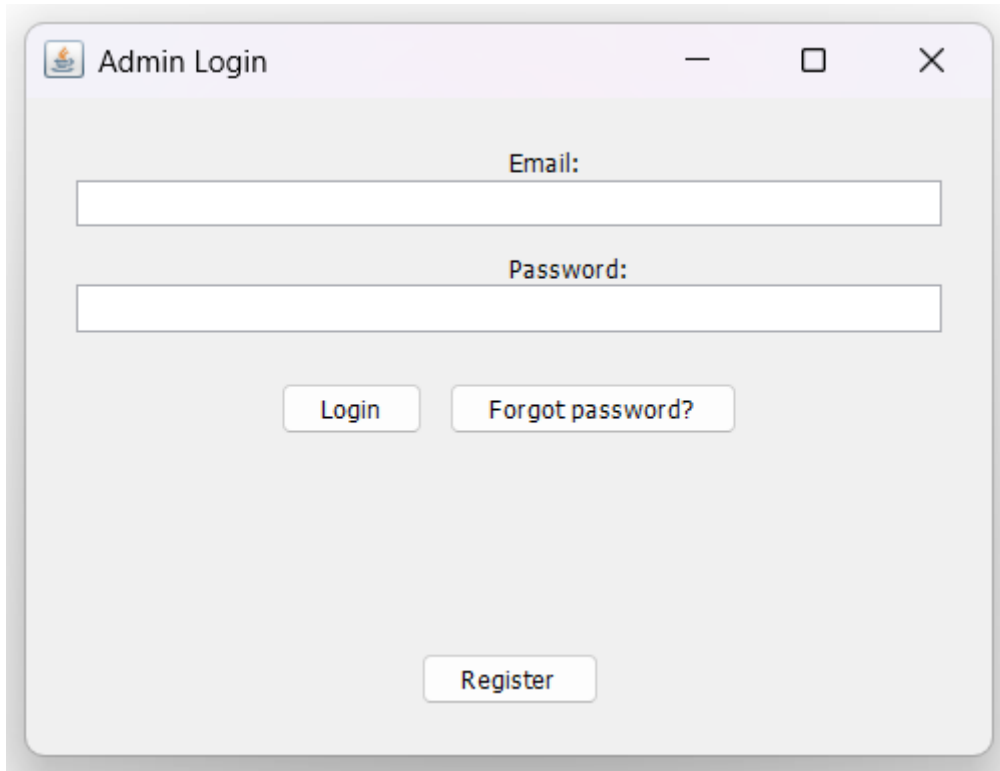| User Profile Interface |
|---|
| |
| This interface gives passengers a simple, secure way to view and update their personal account details.

User Information Section:
1. Name
2. Email
3. Phone Number
4. Password Management |

Logout Message
The Logout Interface prompts a quick confirmation with a message, users can choose Yes to securely end the session or No to return without changes. Once confirmed, a brief notification will appears.

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Admin Login Interface

This interface is exclusive to the admins, so they can log in. Admins can enter their credentials to take them to the area of their management account.

 • Email: This is the field where the user can write their email that they are registered to.

 • Password: This is a secure field for users to enter their password without showing the characters.

• Login: This button, when clicked, will have the system check the information entered and redirect the user to Passenger Dashboard.

• Forgot password?: If the user forgot the password, this will help the user recognize their password again.

• Register: For those who are new and do not have an account, clicking this will take the user to the register interface where a new account can be created.

Admin Dashboard Interface
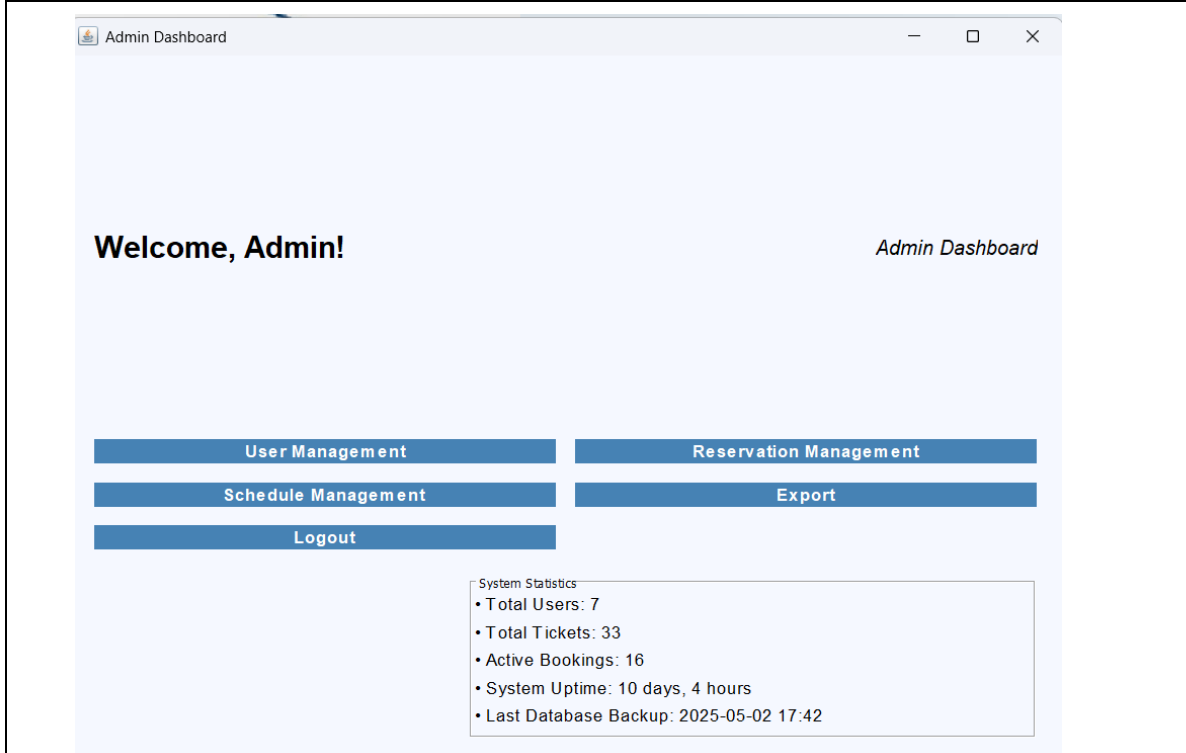
The Admin Dashboard is the central hub for managing the Travel Booking System, providing administrators with a unified platform to monitor operations, manage users, and ensure smooth system performance.

Core Management Modules:

- User Management: Control user accounts, roles, and permissions.
- Reservation Management: Monitor and resolve booking conflicts.
- Schedule Management: Adjust transportation schedules and optimize routes.
- Export Functions: Extract data about users.
- Logout: Allows the admin to securely log out with a single click.

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User Management Interface

The User Management screen is where administrators handle all account data for the Travel Booking System. It provides a simple form to enter or edit a user's basic details, buttons to add, remove, or update accounts, and a live list of every user in the system.

Core Management Modules:

- Form Fields:
    - Name: Enter the user's full name
    - Email: Enter the user's email address
    - Role: Select the user's role (Passenger, Admin)
- Add User: Creates a new account once name, email, and role are filled in.
- Remove User: Deletes the selected user from the system.
- Update User: Saves any changes made to an existing user's details.
- Current Users List: A scrollable display showing each user's Name, Email, Phone, and Role for quick reference.

Reservation Management Interface
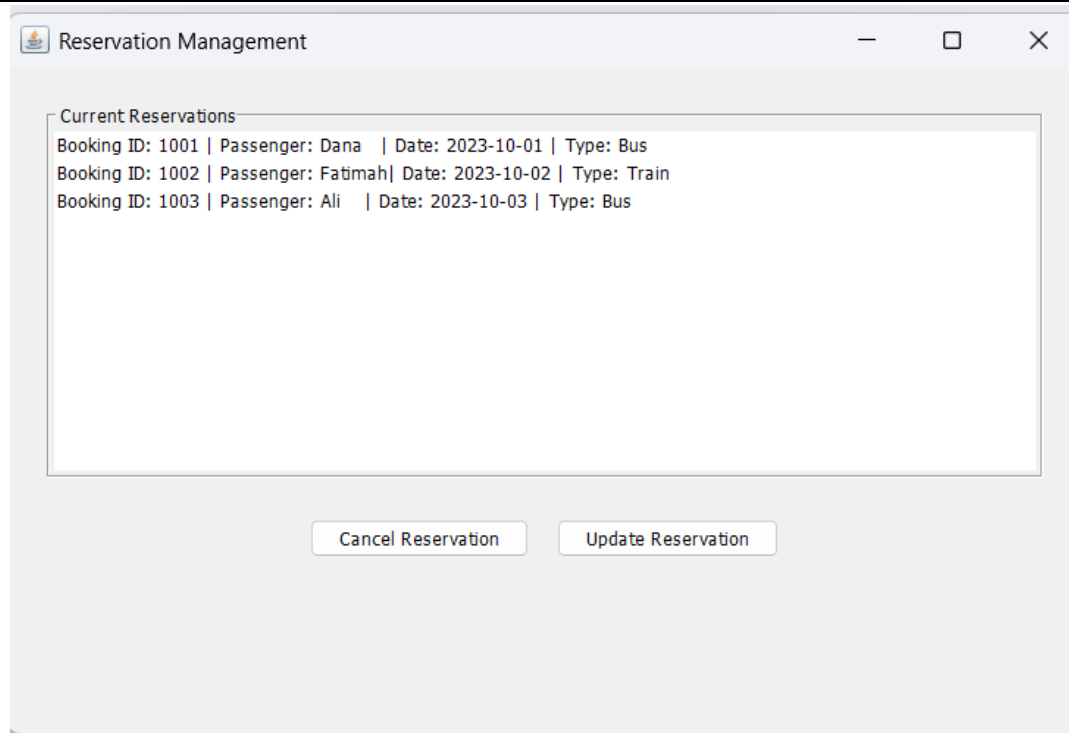
The Reservation Management screen lets the admins view and control all active bookings in the Travel Booking System. It provides a clear list of each reservation and simple controls to modify or remove them.

Core Management Modules:

- Current Reservations List: Displays each booking's ID, passenger name, travel date, and transport type in a scrollable panel.
- Cancel Reservation: Removes the selected booking from the system after confirmation.
- Update Reservation: Opens the selected reservation's details for editing (date, passenger, or transport type).

Schedule Management Interface

 The Schedule Management screen is the central interface for creating, editing, and removing transportation timetables in the Travel Booking System. It combines a simple data entry form with action buttons.

- Core Management Modules:
- Form Fields:
    - Schedule ID: Unique identifier for the timetable entry
    - Transportation Type: Enter Bus or Train
    - Departure Time: Scheduled departure
    - Arrival Time: Scheduled arrival
- Add Schedule: Creates a new schedule once all fields are filled in
- Update Schedule: Saves any edits made to the selected schedul
- Delete Schedule: Removes the highlighted schedule from the system
- Current Schedules List: A scrollable display showing each entry's Schedule ID, Type, Departure and Arrival times, From/To stations, and available seats

Schedule Management Interface

The Data Export Interface allows administrators to extract structured data from the Schedule Management system.

- Select Table : A dropdown menu
- Export Button: A button labeled "Export Selected Table" for downloading the CSV file.
- Status Message : Verifies active database connection and displays the number of available tables.