Use Case	Login
Scenario	Passenger or Admin logs into the Helwan Wings airline reservation system.
Triggering event	User wants to access their account to book flights or manage system.
Brief description	User enters email/password; system validates credentials and logs them in, redirecting to appropriate dashboard.
Actors	Passenger, Admin
Related use cases	Registration, Book Tickets, Manage Flights
Stakeholders	Passengers, Airline Management, System Administrators
Preconditions	User must have an existing account in the system.
Postconditions	User authenticated and redirected to appropriate dashboard (passenger home page or admin dashboard).

	Actor	System
Flow of activities	**1. Open login page.**	
	2. Enter email and password.	
		3. Validate credentials format.
		4. Check if account exists in database.
		5. Verify password hash matches.
	6. Click "Login".	
		7. Create user session.
		8. Redirect user to homepage or admin dashboard.
Exception Conditions	Empty fields, invalid email format, wrong credentials, account locked, database error.	

Use Case	Registration
Scenario	New passenger creates an account in the system.
Triggering event	Guest wants to register to book flights.
Brief description	User enters personal information; system validates input and creates new account.
Actors	Guest (New Passenger)
Related use cases	Login
Stakeholders	Passengers, Airline Management
Preconditions	User not already registered with same email or national ID.
Postconditions	Account created successfully and user can proceed to login.

	Actor	System
Flow of activities	**1. Open registration page.**	
	2. Enter personal information (name, email, password, phone, national ID/passport).	
		3. Validate all input fields (format, required fields).
		4. Check if email or national ID already exists.
		5. Hash password for security.
	3. Click "Register".	
		6. Create new user account in database.
		7. Show success message and redirect to login page.
Exception Conditions	Email already exists, invalid input format, password too weak, database error.	

Use Case	Book Tickets
Scenario	Passenger books flight ticket.
Triggering event	Passenger wants to book a flight.
Brief description	System collects flight selection and passenger details, validates availability, creates booking reservation.
Actors	Passenger
Related use cases	Complete Payment, View Ticket
Stakeholders	Passengers, Airline Management
Preconditions	Passenger logged in. Flights available in system.
Postconditions	Booking created with pending payment status. Seats temporarily held.

	Actor	System
Flow of activities	**1. Navigate to booking page.**	
		2. Display booking form.
	3. Enter flight details (from, to, date, class, flight type).	
	4. Enter passenger details (name, DOB, passport, phone, email).	
	5. Select preferences (seat type, meal).	
		6. Validate all passenger information.
	6. Review booking summary.	
	7. Click "Confirm Booking".	

	8. Check flight availability.
	9. Generate unique booking ID.
	10. Create reservation record (status: pending payment).
	11. Display booking confirmation with booking ID.
	12. Redirect to payment page.
Exception Conditions	Invalid passenger data, validation errors, system error.

Use Case	Complete Payment
Scenario	Passenger completes payment for booking.
Triggering event	Passenger proceeds to payment after booking confirmation.
Brief description	System processes credit card payment, updates booking status, generates ticket.
Actors	Passenger, Bank (External System)
Related use cases	Book Tickets, View Ticket
Stakeholders	Passengers, Bank, Airline Management
Preconditions	Valid booking exists. Payment gateway operational.
Postconditions	Payment processed, booking confirmed, ticket generated.

	Actor	System
Flow of activities		1. Display payment page with booking summary and total amount.
	2. Enter card details (number, name, expiry, CVV).	
	3. Enter billing address.	
		4. Validate card details format.
	4. Click "Pay Now".	
		5. Send payment request to bank gateway.
		6. Bank validates card and checks funds.
		7. Bank requests PIN/OTP verification.
	5. Enter PIN/OTP.	
		8. Bank verifies PIN and processes payment.
		9. Update booking status to "Confirmed".

	10. Generate digital ticket with QR code.
	11. Send confirmation email with e-ticket.
	12. Display success message and ticket details.
Exception Conditions	Invalid card, insufficient funds, incorrect PIN, payment timeout, bank gateway error.

Use Case	View Ticket
Scenario	Passenger views their confirmed ticket.
Triggering event	Passenger wants to view or download ticket.
Brief description	System retrieves and displays ticket with all flight and passenger details.
Actors	Passenger
Related use cases	Complete Payment, Cancel Booking
Stakeholders	Passengers
Preconditions	Booking confirmed and payment successful.
Postconditions	Ticket displayed or downloaded.

	Actor	System
Flow of activities	**1. Select "View Ticket" or click link in email.**	
		2. Retrieve ticket from database using booking ID.
		3. Display ticket with details (PNR, flight info, passenger info, QR code, seat number).
	2. Review ticket details.	
	3. Download PDF or print ticket.	
Exception Conditions	Ticket not found, booking cancelled, system error.	

Use Case	Cancel Booking
Scenario	Passenger cancels their booking.
Triggering event	Passenger decides to cancel their flight.
Brief description	System processes cancellation request, calculates refund amount, updates booking status.
Actors	Passenger
Related use cases	View Ticket
Stakeholders	Passengers, Airline Management
Preconditions	Valid confirmed booking exists.
Postconditions	Booking cancelled, refund processed according to policy.

Flow of activities	Actor	System
	1. Select "Cancel Booking".	
		2. Display booking details and cancellation policy.
		3. Calculate refund amount based on cancellation time.
	2. Review refund amount and policy.	
	3. Confirm cancellation.	
		4. Update booking status to "Cancelled".
		5. Process refund to original payment method.
		6. Send cancellation confirmation email.
		7. Display cancellation confirmation message.
Exception Conditions	Cancellation deadline passed, refund processing error.	

Use Case	Manage Flights
Scenario	Admin adds, edits, or deletes flights in the system.
Triggering event	Admin needs to update flight schedule or details.
Brief description	System allows admin to perform CRUD operations on flight records.
Actors	Admin
Related use cases	Admin Login
Stakeholders	Admin, Airline Management
Preconditions	Admin authenticated and authorized.
Postconditions	Flight database updated with changes.

	Actor	System
Flow of activities		
	1. Login as admin.	
		2. Redirect to admin dashboard.
	3. Select "Manage Flights".	
		4. Display list of all flights.
	5. Select action (Add/Edit/Delete flight).	
	6. Enter or modify flight details (flight number, route, time, price, aircraft).	
		7. Validate admin input.
		8. Check for conflicting bookings (if editing/deleting).
		9. Update flight database.
		10. Log admin action with timestamp.
		11. Display confirmation message.
Exception Conditions	Invalid flight data, conflicting bookings prevent deletion, database error, unauthorized access.	