

5. SYSTEM DESIGN

5.1 DATABASE SCHEMA DESIGN

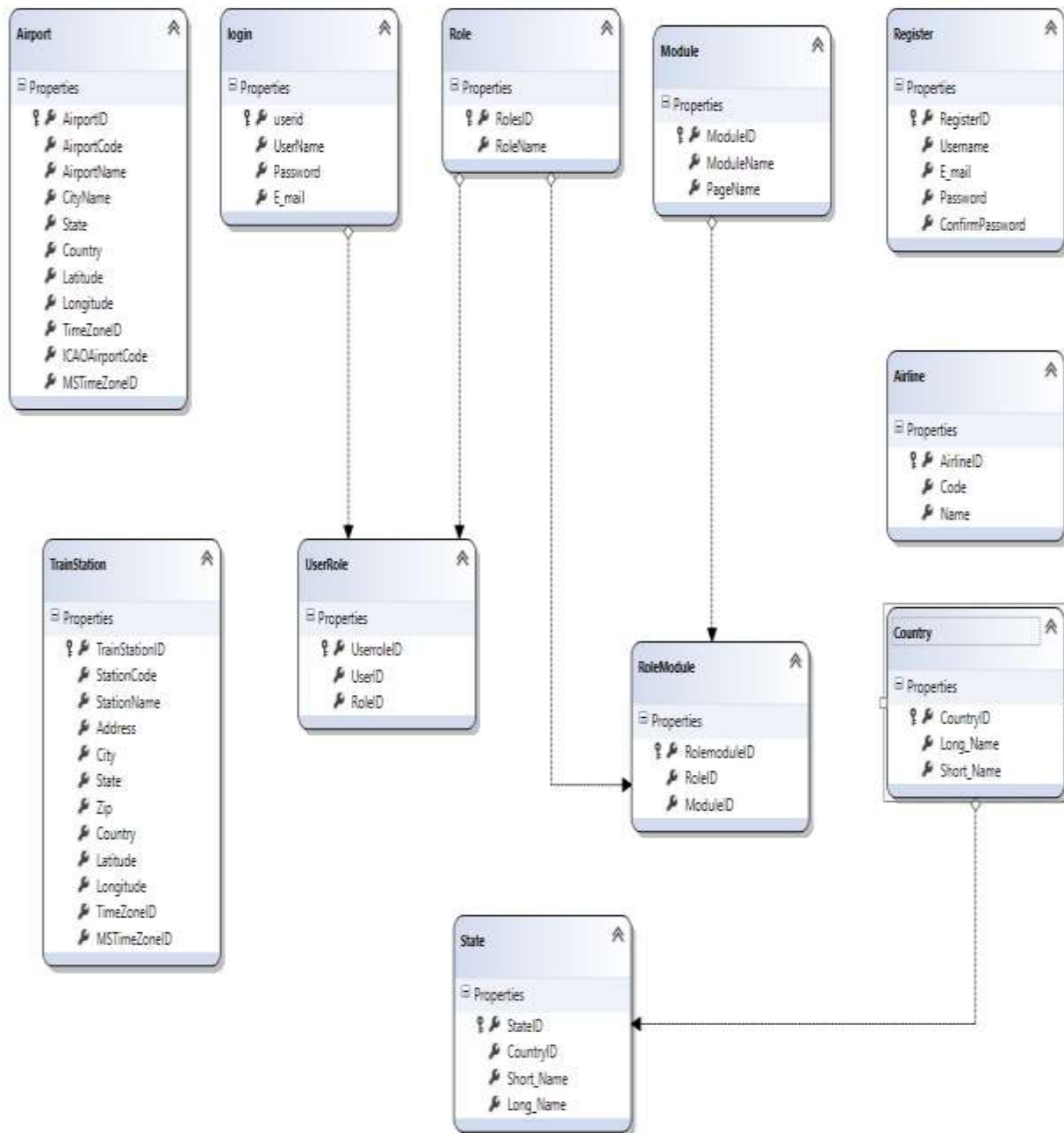


Fig. 5.1: Database Schema

5.2 DATA DICTIONARY

(1) Airlines:

Field Name	Data Type	Field length	Constraint
AirlineID	bigint	-	Primary Key
AirlineCode	nvarchar	2	
Name	nvarchar	255	

Table 5.1: Airlines

(2) Airports:

Field Name	Data Type	Field length	Constraint
AirportID	int	-	Primary Key
AirportCode	nvarchar	3	
AirportName	nvarchar	255	
CityName	nvarchar	255	
State	nvarchar	255	
Country	nvarchar	255	
Latitude	float	-	
Longitude	float	-	
TimeZoneID	nvarchar	255	
MSTimeZoneID	nvarchar	255	

Table 5.2: Airports

(3) Countries:

Field Name	Data Type	Field length	Constraint
CountryID	bigint	-	Primary Key
Long_Name	nvarchar	50	
Short_Name	nvarchar	50	

Table 5.3: Countries

(4) Login:

Field Name	Data Type	Field length	Constraint
userid	int	-	Primary Key
UserName	nchar	20	
Password	nchar	255	
E_mail	nchar	50	

Table 5.4: Login**(5) Module:**

Field Name	Data Type	Field length	Constraint
ModuleID	int	-	Primary Key
ModuleName	nchar	20	
PageName	nchar	20	

Table 5.5: Module**(6) Role _Module:**

Field Name	Data Type	Field length	Constraint
RolemoduleID	int	-	Primary Key
RoleID	int	-	Foreign Key
ModuleID	int	-	Foreign Key

Table 5.6: Role Module**(7) Roles:**

Field Name	Data Type	Field length	Constraint
RolesID	int	-	Primary Key
RoleName	nchar	20	

Table 5.7: Roles

(8) Train _Stations:

Field Name	Data Type	Field length	Constraint
TrainStationID	int	-	Primary Key
StationCode	nvarchar	3	
StationName	nvarchar	50	
Address	nvarchar	50	
City	nvarchar	50	
State	nvarchar	50	
Zip	nvarchar	12	
Country	nvarchar	50	
Latitude	float	-	
Longitude	float	-	
TimeZoneID	nvarchar	255	
MSTimeZoneID	nvarchar	255	

Table 5.8: Train Stations**(9) User _Role:**

Field Name	Data Type	Field length	Constraint
UserroleID	int	-	Primary Key
UserID	int	-	Foreign Key
RoleID	int	-	Foreign Key

Table 5.9: User Role**(10) States:**

Fieldname	Data Type	Fieldlength	Constraint
StateID	bigint	-	Primary Key
CountryID	bigint	-	Foreign Key
Short_Name	char	2	
Long_Name	varchar	30	

Table 5.10: States

5.3 SCREEN LAYOUT

- Admin Side:

The screenshot displays the Admin Side Login interface. At the top, there is a navigation bar with the 'GH' logo on the left and a series of menu items: HOME, SEARCH, LOCATION, PRICING, USER MANAGEMENT, CONTACT, and LOGOUT. The LOGOUT item is highlighted with a blue background. Below the navigation bar is a large banner image showing the underside of a white airplane with 'QATAR' visible on the fuselage, flying against a clear blue sky. In the center of the page is a light blue login box. Inside this box, the word 'Login' is displayed in a large, teal font. Below it are two input fields: the first contains the text 'super admin' and the second is filled with ten dots, representing a password. A blue button labeled 'LOGIN' is positioned below the password field. Underneath the button are two links: 'Forgot your ID or Password?' and 'Create one now', both in a teal color. At the bottom of the page is a dark grey footer. On the left side of the footer are four circular icons representing different mobile devices. To the right of these icons is the copyright text '©2018 Ground Transportation Helper Portal. All Rights Reserved'. On the far right of the footer is a small blue circular icon containing a white upward-pointing arrow.

Figure 5.2 Login

GH

HOME SEARCH LOCATION PRICING USER MANAGEMENT CONTACT LOGOUT

SEARCH AIRPORT DETAILS

ORD Search

Map: Saratoga

Airport Name: O'Hare International Airport
Airport Code: ORD

Airport Code: **ORD**

Airport Name: **O'Hare International Airport**

CityName: **Chicago**

State: **IL**

Country: **US**

Latitude: **41.97416**

Longitude: **-87.90732**

TimeZoneID: **America/Chicago**

MSTimeZoneID: **Central Standard Time**

Save Cancel

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Figure 5.3 Retrieve airport data from Google

GH

HOME

SEARCH


LOCATION

PRICING

USER MANAGEMENT

CONTACT

LOGOUT




SEARCH TRAIN STATION DETAILS

Map

Satellite

TrainStation Name: Chico Station

TrainStation Code: CIC



TrainStation Code:

CIC

TrainStation Name:

Chico Station

Address:

450 Orange St

CityName:

Chico

State:

California

Zip:

95926

Country:

US

Latitude:

39.72337

Longitude:

-121.8461

TimeZoneID:

America/Los_Angeles

MTTimeZoneID:

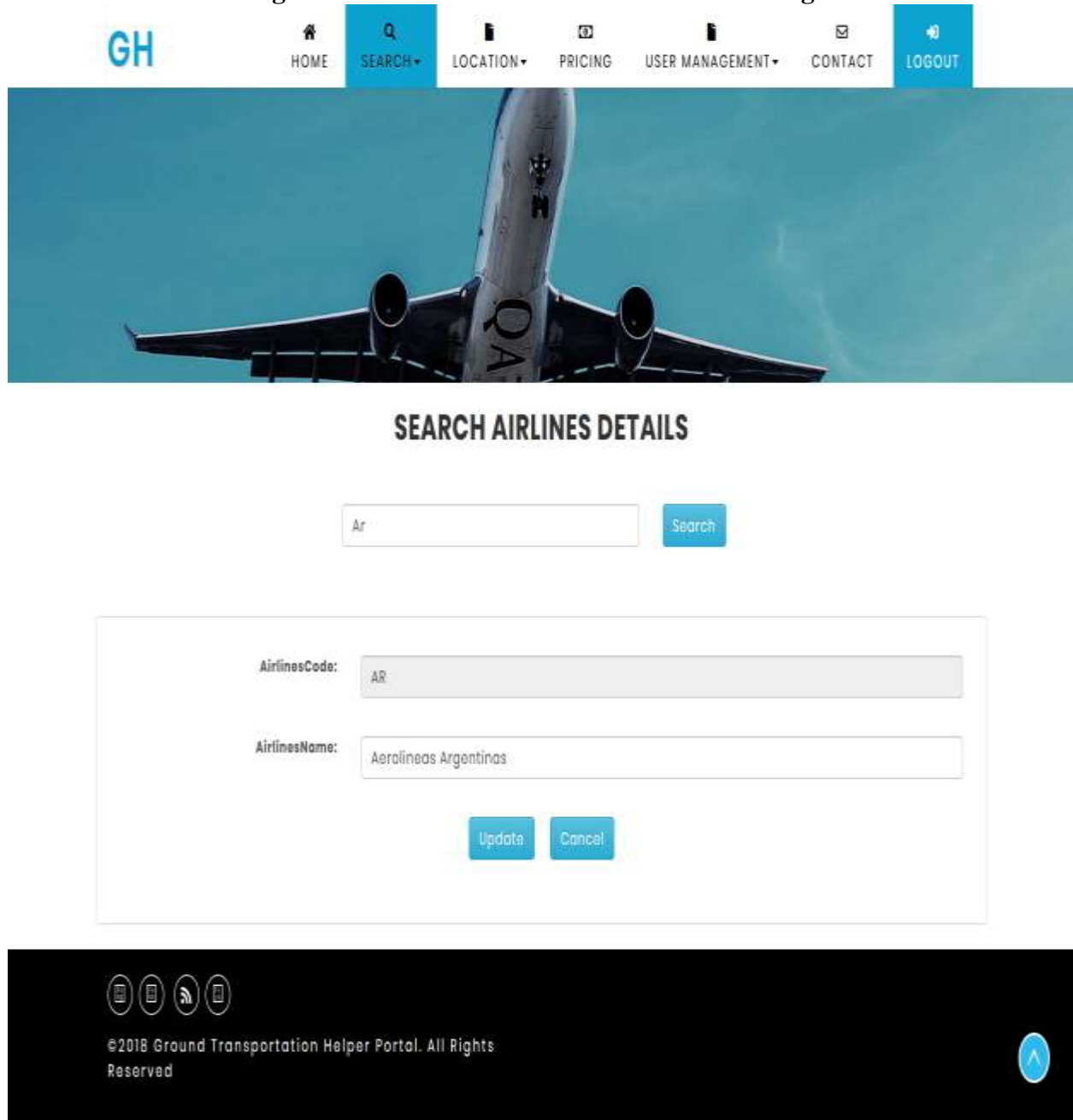
Pacific Standard Time

Save

Cancel



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Figure 5.4 Retrieve train station data from Google

The screenshot displays the GH website's search interface. At the top, a navigation bar includes links for HOME, SEARCH, LOCATION, PRICING, USER MANAGEMENT, CONTACT, and LOGOUT. Below the navigation bar is a large banner image of an airplane. The main heading is "SEARCH AIRLINES DETAILS". A search bar contains the text "Ar" and a "Search" button. Below the search bar, a form displays the retrieved data: "AirlinesCode: AR" and "AirlinesName: Aerolineas Argentinas". There are "Update" and "Cancel" buttons at the bottom of the form. The footer contains icons for social media, copyright information "©2018 Ground Transportation Helper Portal. All Rights Reserved", and a blue circular button with an upward arrow.

Figure 5.5 Retrieve airline data from database

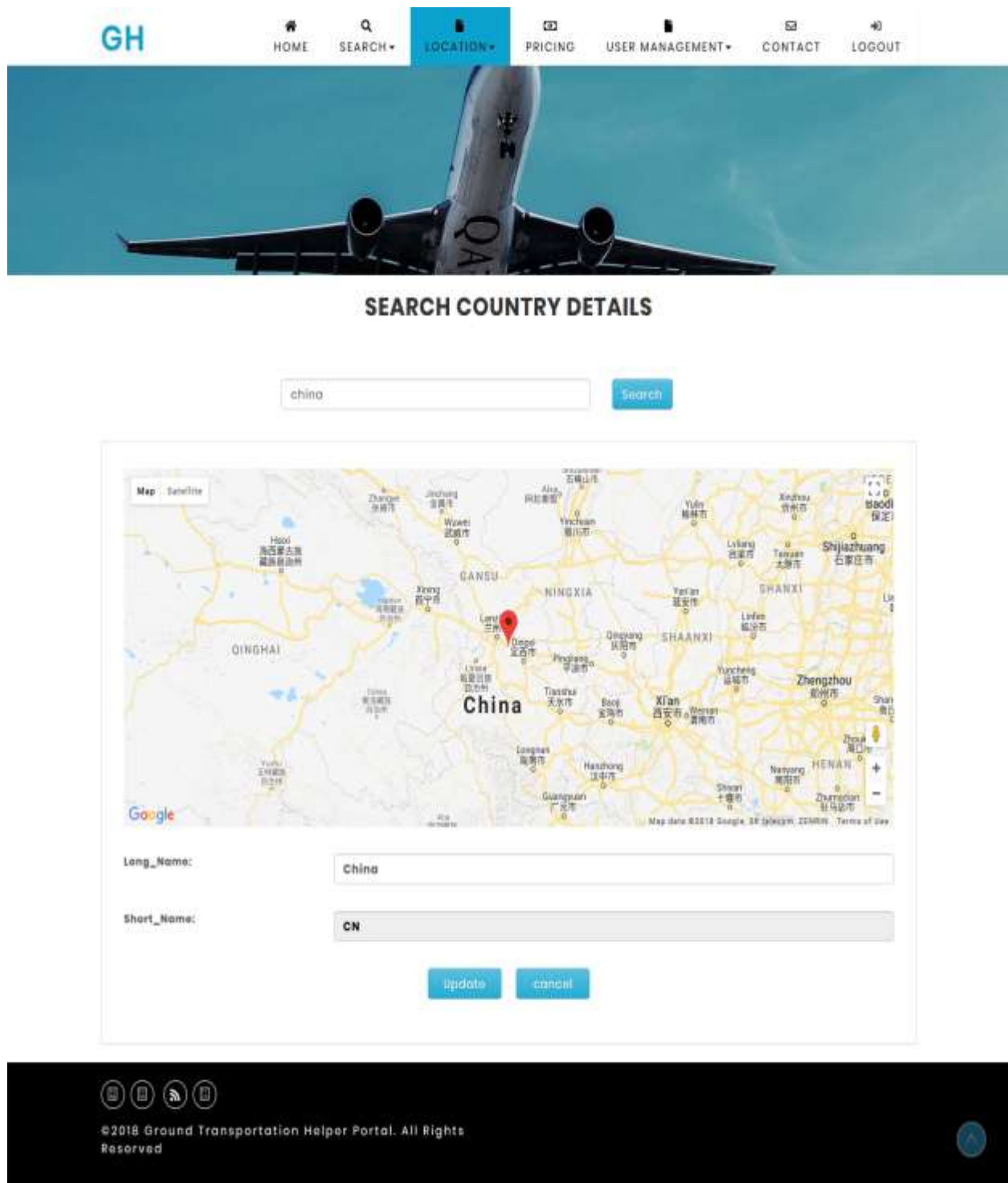


Figure 5.6 Search Country

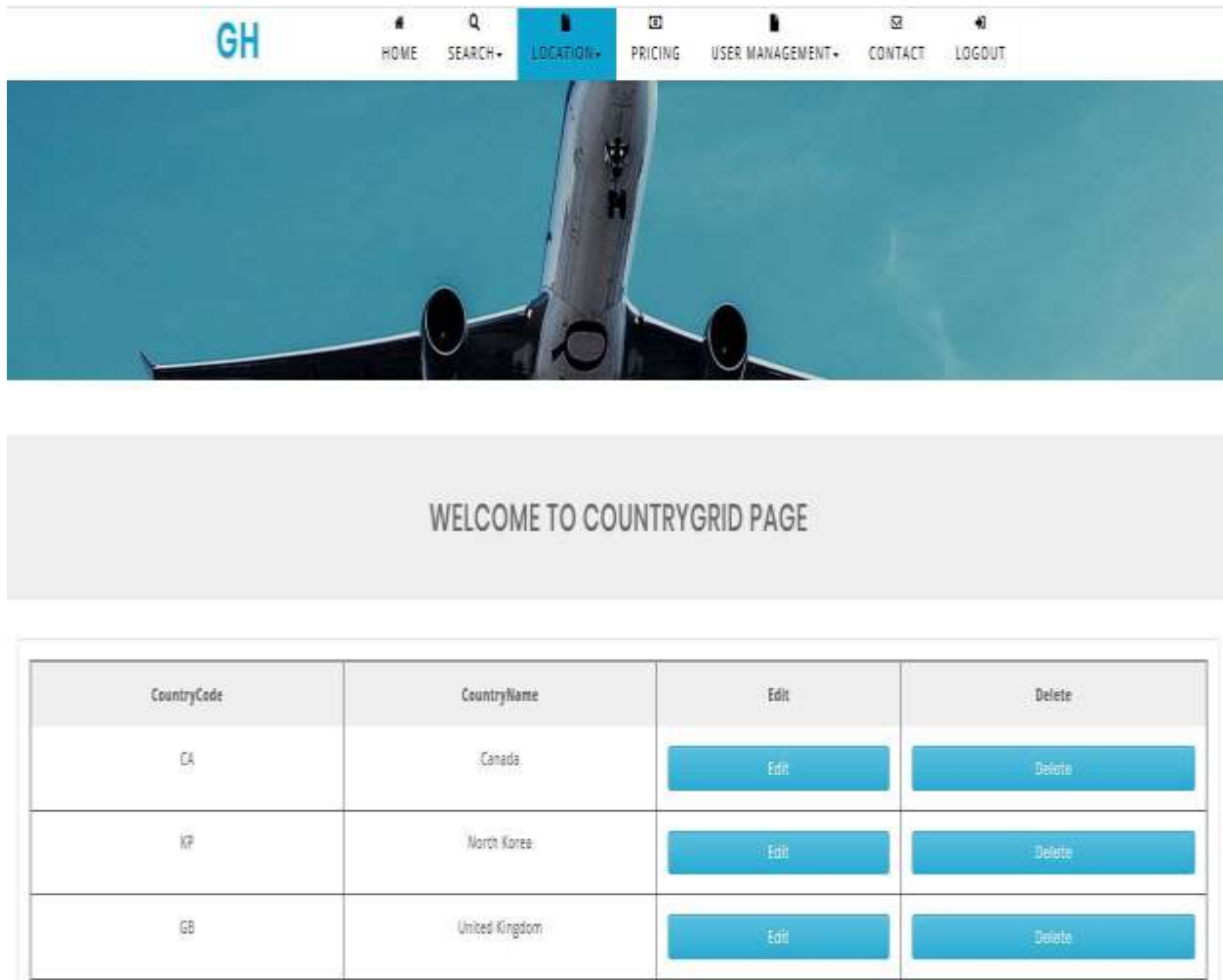


Figure 5.7 Country grid

GH

HOME

SEARCH


LOCATION

PRICING

USER MANAGEMENT

CONTACT

LOGOUT



Create a New Account

super admin

dit157@charusat.edu.in

Please Enter Confirm Password.

SELECT ROLE:

☐ Admin

☐ User

☐ HR

☒ Super Admin

☐ Project manager

Update User

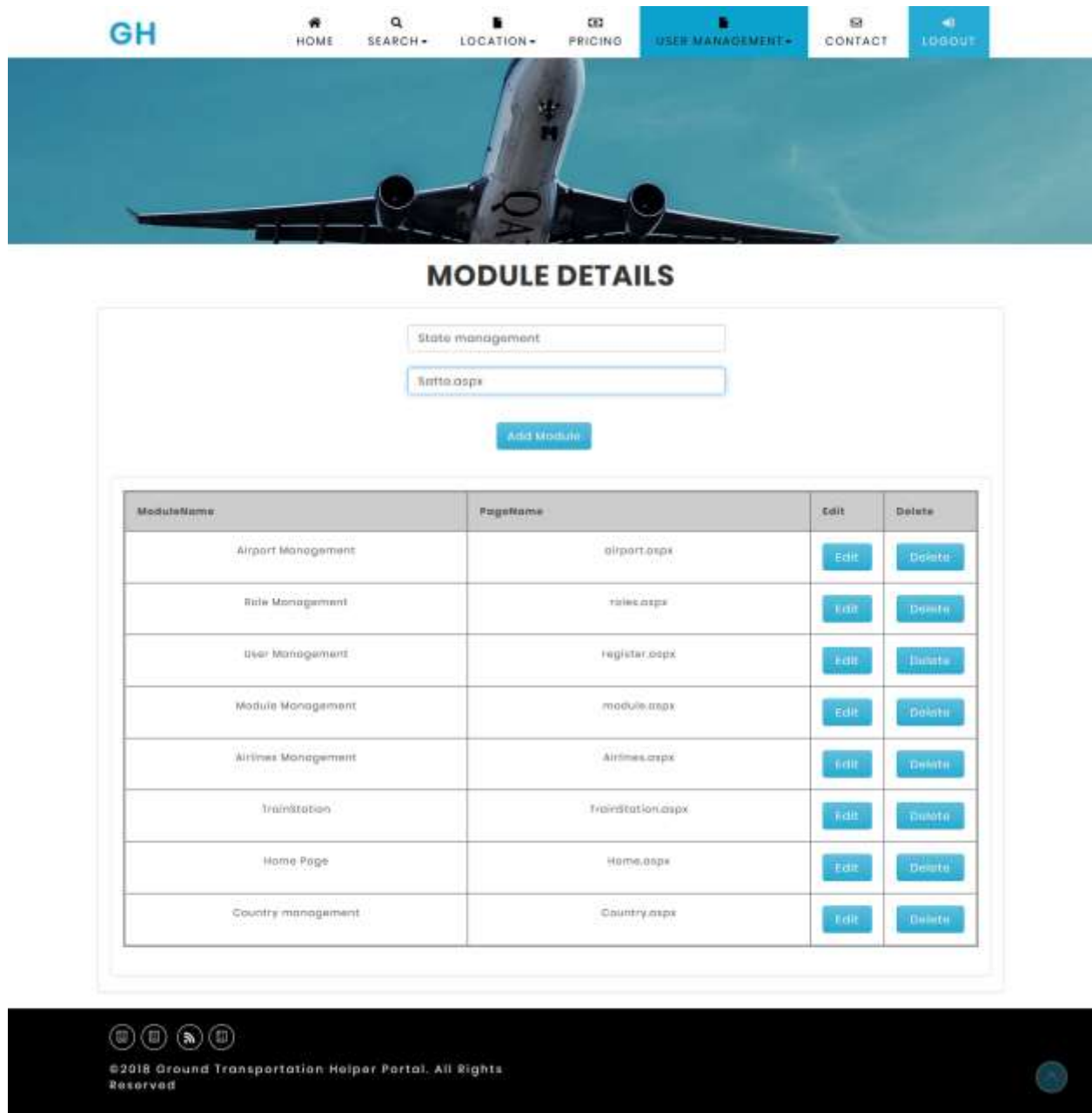
Cancel User

Username	Edit	Delete
Hitesh Dandhi	<div>Edit</div>	<div>Delete</div>
Vaibh shah	<div>Edit</div>	<div>Delete</div>
Rajee	<div>Edit</div>	<div>Delete</div>
super admin	<div>Edit</div>	<div>Delete</div>
Alic	<div>Edit</div>	<div>Delete</div>

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Figure 5.8 Create user



GH

HOME SEARCH LOCATION PRICING USER MANAGEMENT CONTACT LOGOUT

MODULE DETAILS

State management


State.aspx








Add Module


ModuleName	PageName	Edit	Delete
Airport Management	airport.aspx	Edit	Delete
Role Management	roles.aspx	Edit	Delete
User Management	register.aspx	Edit	Delete
Module Management	module.aspx	Edit	Delete
Airlines Management	Airlines.aspx	Edit	Delete
TrainStation	trainstation.aspx	Edit	Delete
Home Page	Home.aspx	Edit	Delete
Country management	Country.aspx	Edit	Delete

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Figure 5.9 Add Module



 HOME
  SEARCH
  LOCATION
  PRICING
  USER MANAGEMENT
  CONTACT
  LOGOUT

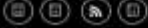


ROLES DETAILS

SELECT MODULE

☒ Airport Management
☐ Role Management
☐ User Management
☐ Module Management
☒ Airlines Management
☒ TrainStation
☐ Home Page
☐ Country management

Role Name	Edit	Delete
Admin	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
User	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
HR	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Super Admin	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Project manager	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>



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Figure 5.10 Add Roles

- **User Side:**

Asterisk() indicates mandatory fields.*

Search*:	Sedan Only	▼
Service Type*:	Transfer	▼
Pick-up location:	At airport	▼
Airport*:	ew	
Airline / FBO*:	EWB New Bedford Municipal, New Bedford, Massachusetts, US	
Flight No / Tail No*:	EWN Simmons Nott Airport, New Bern, North Carolina, US	
Origin Airport:	EWR Newark Intl Airport, Newark, New Jersey, US	
International?*	EWD Wadi al-Dawasir Domestic Airport, , Riyadh Province, SA	
Drop-off location:	EWI Enarotali Airport, , ID	
Pick-up date and time*:	ADW Andrews Air Force Base, Camp Springs, Maryland, US	
	AEP Jorge Newbery, Buenos Aires, AR	
Total passengers*:	CIU Chippewa Cnty Intl, Sault Ste Marie, Michigan, US	
How many are children?	GFK Grand Forks Mark Andrews Intl, Grand Forks, North Dakota, US	
	GON Groton New London Airport, New London, Connecticut, US	



[Check Travel Time](#)

Figure 5.11 Check Airport Details

Pick-up location:	At airport
Airport*:	EWR
	(Includes Helipads)
Airline / FBO*:	DL
Flight No / Tail No*:	123
Origin Airport:	
International?*:	No
Drop-off location:	Enter address
Country*:	United Arab Emirates
Building name:	Turkey
Street address*:	Turks and Caicos Islands
Suite/Apt #:	Uganda
City*:	Ukraine
State/Province:	United Arab Emirates
Postcode:	United Kingdom
Pick-up date and time*:	United States
Total passengers*:	Uruguay
How many are children?	Vanuatu
	Venezuela
	Vietnam
	Virgin Islands British
	Virgin Islands US
	Yemen
	Zambia
	Zimbabwe

Figure 5.12 Select Country

SEARCH RESULTS

[NEW RIDE](#)

Corporation: *Default*

PNR: ABCDEF | **Area:** A

Passenger: RESERVATION TEST

Agency: *CarGo Travel*

Trip Summary

Pickup:
Newark Intl Airport (EWR)
UA 482
05 Oct 2018 at 08:49 PM





Drop-off:
25 Main Street,
Hackensack, NJ, 07601, US

Pick-up date and time:
Friday, 05 Oct 2018
08:49 PM

Est. Travel Time: 0 hrs 45 mins
Approx. Distance: 19.44 miles

Search Results

Sort By: [Rate](#) [Providers](#)

 <i>Enterprise</i>	★	85.32 USD Flat Rate	Continue
 <i>CarGo Travel</i>	★	103.00 USD Hourly Rate	Continue
 <i>CarGo International</i>	★	120.22 USD Flat Rate	Continue
 <i>AutoGo Travel</i>	★	240.00 USD Est. based on hourly rate	Continue

` Figure 5.13 Search result

5.4 METHOD PSEUDO CODE

5.4.1 Login

input: Username, Password

```
if(is set(Login)){  
  if(Username != NULL && Password != NULL){  
    result<-check database(Username & Password)  
    if(result == "Yes"){  
      set session variable  
      Login Successful  
    }else{  
      Error  
    }  
  }else{  
    Error  
  }  
}
```

Output: Success full login or Print error

5.4.2 Register

input: username, email, Password, confirm Password

```
if(is set(register)){  
  error<-0  
  if(username!= NULL && password != NULL && email != NULL && Confirm Password  
  != NULL)  
  {  
    if(username < 8 && username != UNIQUE){  
      error<-1  
    }  
    if(password != match(pattern)){
```

```
        error<-1
    }
    if(email != match(pattern) && email != UNIQUE){
        error<
    }
    if(Confirm password != match(pattern)){
        error<-1
    }
}
if(error != 0){
    Error
}else{
    insert into database
        (username, email, Password, confirm Password)
    successful login
}
}else{
    Error
}
}
```