

Project Structure

The project is separated into 3 abstract layers to maintain modularity and singularity of the application:

1. CenturyAirline - Umbraco backend instance source files
2. CenturyAirline.Core - Core business logic of the umbraco instance is separated into class library
3. CenturyAirline.FED - angular frontend project

Database

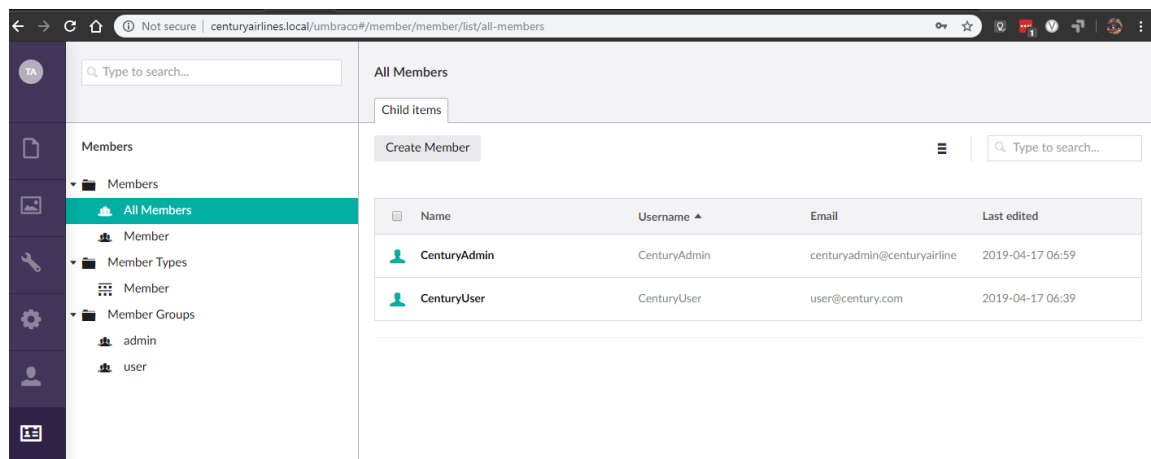
Umbraco database is on SQL server 2016. The DB Scripts are shared in git folder: DBScripts

Which includes database schema and data.

Umbraco Membership

In the Umbraco backend, 2 member types are defined mainly:

1. User - Website users are associated to this Member group
2. Admin - Website admins are associated to this Member group



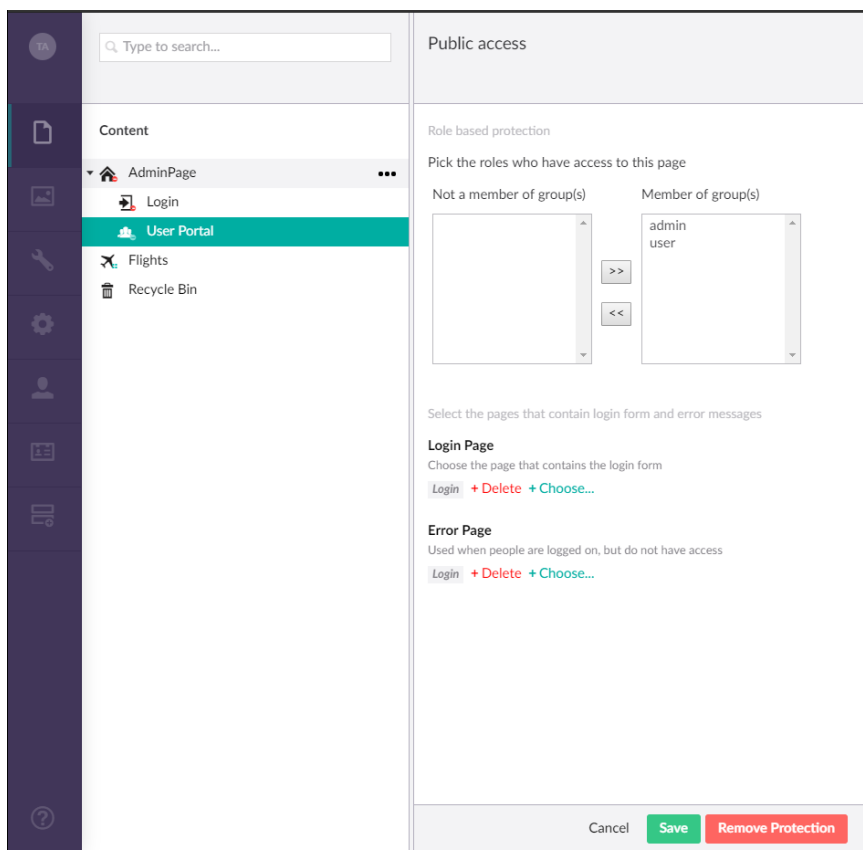
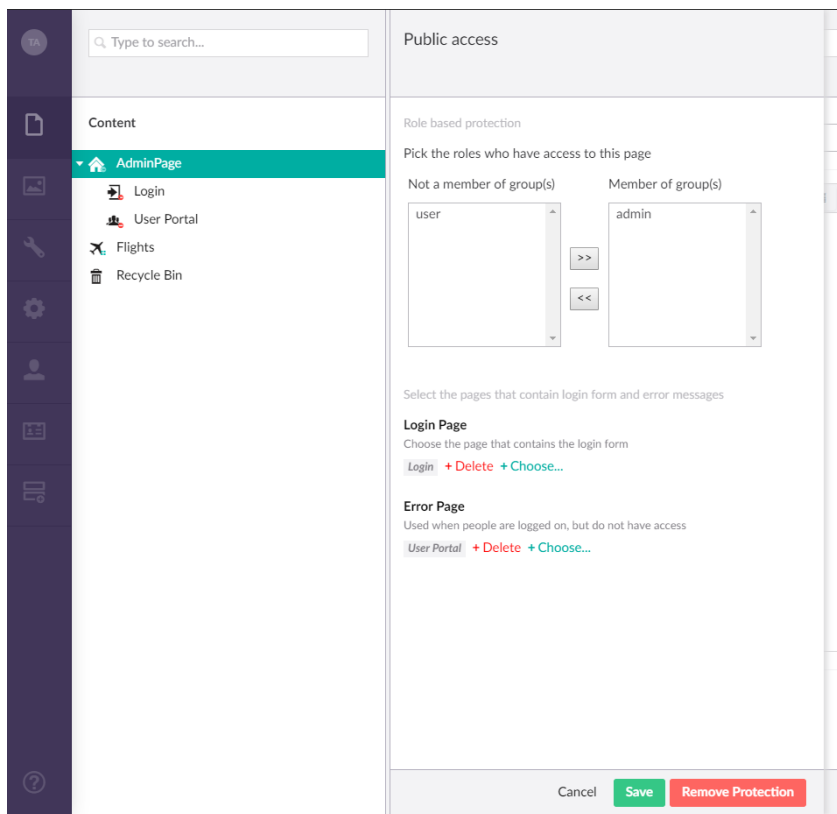
Content Restriction

Umbraco content restriction is implemented by page level access permissions and Umbraco web API Authorisations

Admin page (root) is accessible only for members belonging to group "Admin"

User-portal page is accessible only for members belonging to group "User" & "Admin"

Unauthenticated users will be redirected to Custom login page. This umbraco setup is as follows:



The custom Login page template post form to custom Umbraco Auth surface controller, which is an MVC controller that redirects users based on their roles.

User portal: flight booking

Century Airlines

Home

Flights

Create

Name	Flight No#	Capacity	From	Deprt.	To	Arr.	Actions
Singapore Airlines	SQ217	220	MEL	April 15, 2019 18:07	SNG	April 15, 2019 18:07	<button>Book</button>
Emirates	EK307	237	SYD	April 26, 2019 18:08	DXB	April 19, 2019 18:08	<button>Book</button>

SQ217

Singapore Airlines

Flight on time

First Name

Enter First Name

Last Name

Enter Last Name

Number of passengers

0

Book flight

Logged in as CenturyUser

logout

The Admin Dashbord is rendered by Angular app as follows:

Century Airlines

Home

Flights

Create

Dashboard

Welcome to Century Airlines booking system

Source code

Logged in as CenturyAdmin

logout

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Century Airlines

Home

Flights

Create

Flight Name

Luftansa

Flight Number

LX56

Passenger Capacity

232

Departure City

HGF

Flight Start Time

2019-04-18

Arrival City

FFF

Flight End Time

2019-04-18

Flight Description

Logged in as CenturyAdmin

logout

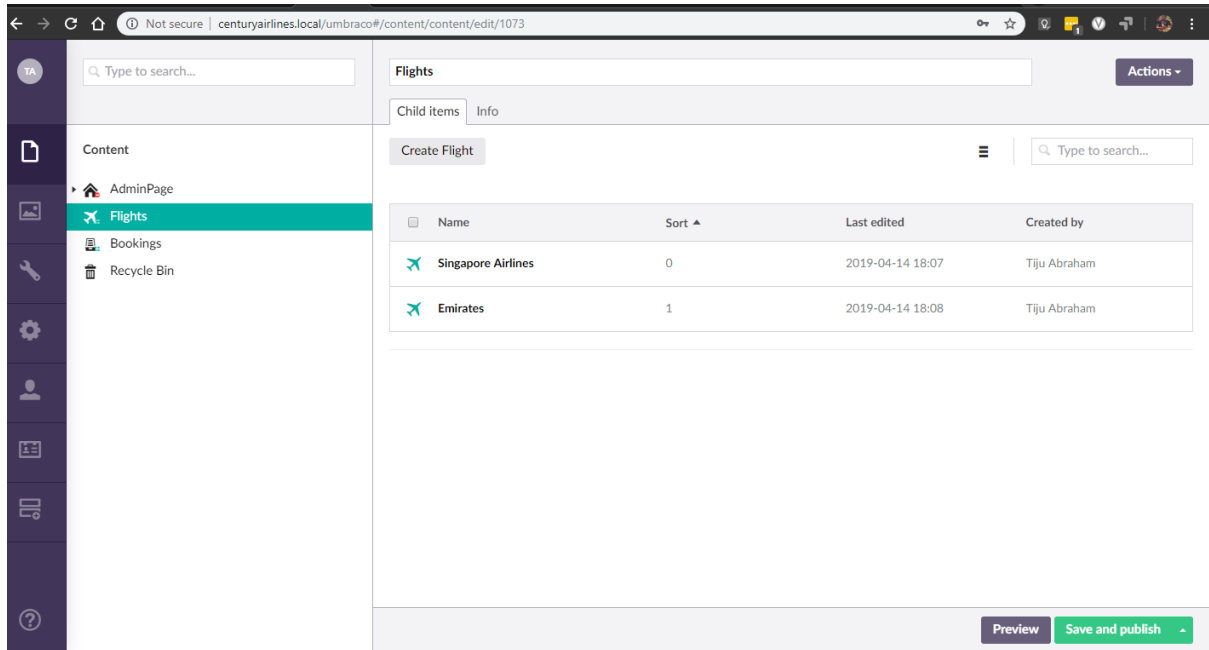
Create flight

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Angular forms are posted to respective umbraco web api endpoints which performs CRUD operation on the documents. For example, Flight list can be gathered by the angular HTTP services API endpoint:

```
/umbraco/api/flightsdata/getflights
```

Documents are programmatically created in Umbraco from Angular form submits-



Frontend Build

This project uses Angular CLI version as below. Webpack is configured so that the scripts are bundled and copied to UmbracoCM/Scripts folder.

Angular CLI

Angular CLI: 7.3.8

Node: 10.10.0

OS: win32 x64

Angular: 7.2.13

... animations, common, compiler, compiler-cli, core, forms

... language-service, platform-browser, platform-browser-dynamic

... router

Package

Version

• @angular-devkit/architect	0.13.8
• @angular-devkit/build-angular	0.13.8
• @angular-devkit/build-optimizer	0.13.8
• @angular-devkit/build-webpack	0.13.8
• @angular-devkit/core	7.3.8
• @angular-devkit/schematics	7.3.8
• @angular/cli	7.3.8
• @ngtools/webpack	7.3.8
• @schematics/angular	7.3.8
• @schematics/update	0.13.8
• rxjs	6.3.3
• typescript	3.2.4
• webpack	4.29.0

webpack.config.js generated by the command
ng eject

Forms

Forms use

Bootstrap 4 and jQuery