Rotary Driver App Documentation

Release 1.0

Bryce Chambers

Apr 06, 2018

Contents:

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03 March, 2018

CHAPTER 1

Introduction

The Rotary Driver App (RDA) is an online platform for reserving cars for the Rotary Community Driver Program. It aims to provide an efficient and convenient way of reserving cars for all individuals involved.

Issues caused by human error can easily be avoided by the RDA, like preventing conflicting reservations.

1.1 System Features

1.1.1 Introduction

This section details the core functionality of the system, and should be examined in tandem with the technical documentation.

1.1.2 Managing Users

Add User

- Description and Priority

This is a high priority feature which allows the system administrators to create a new user of a particular type.

- Stimulus/Response Sequences

Edit User

- Description and Priority

This is a medium priority feature which allows the system administrators or users to edit user information.

- Stimulus/Response Sequences

Search User

- Description and Priority

This is a medium priority feature which allows the system administrators to search users based on some chosen filters.

- Stimulus/Response Sequences

Making Booking Requests

1.1.3 Make Booking Request

- Description and Priority

This is a high priority feature which allows the users to create a request a booking for a car.

- Stimulus/Response Sequences

1.1.4 Tracking Bookings

- Description and Priority

This is a medium priority feature which allows the users to find their requests and to see the progress of its approval.

1.1.5 Add Car

- Description and Priority

This is a high priority feature which allows the system administrators to create a new car.

1.1.6 Edit Car

- Description and Priority

This is a low priority feature which allows the system administrators to edit an existing car.

1.1.7 Remove Car

- Description and Priority

This is a low priority feature which allows the system administrators to remove a car from the database.

1.2 User Guide

1.2.1 Introduction

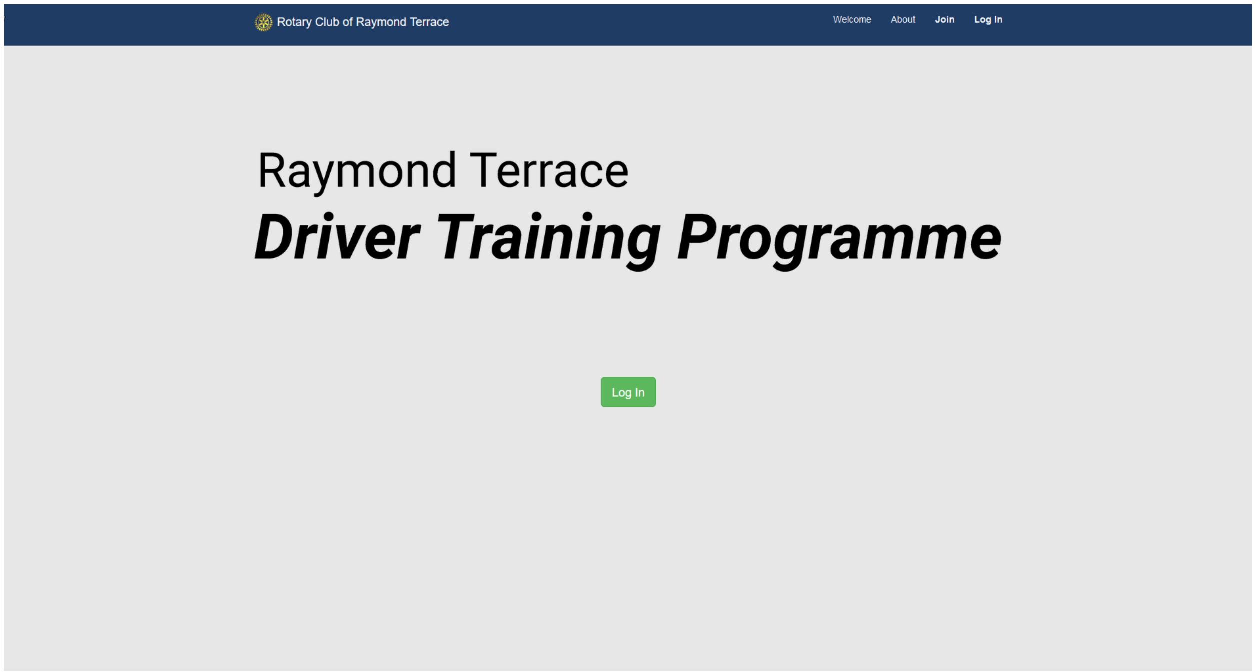
This is a how-to-guide for students, mentors and organizers of the program

1.2.2 How to Create an Account

1. Visit the user sign-up page
2. You will receive a verification email. Follow the link inside to confirm your account

1.2.3 How to Make a Booking

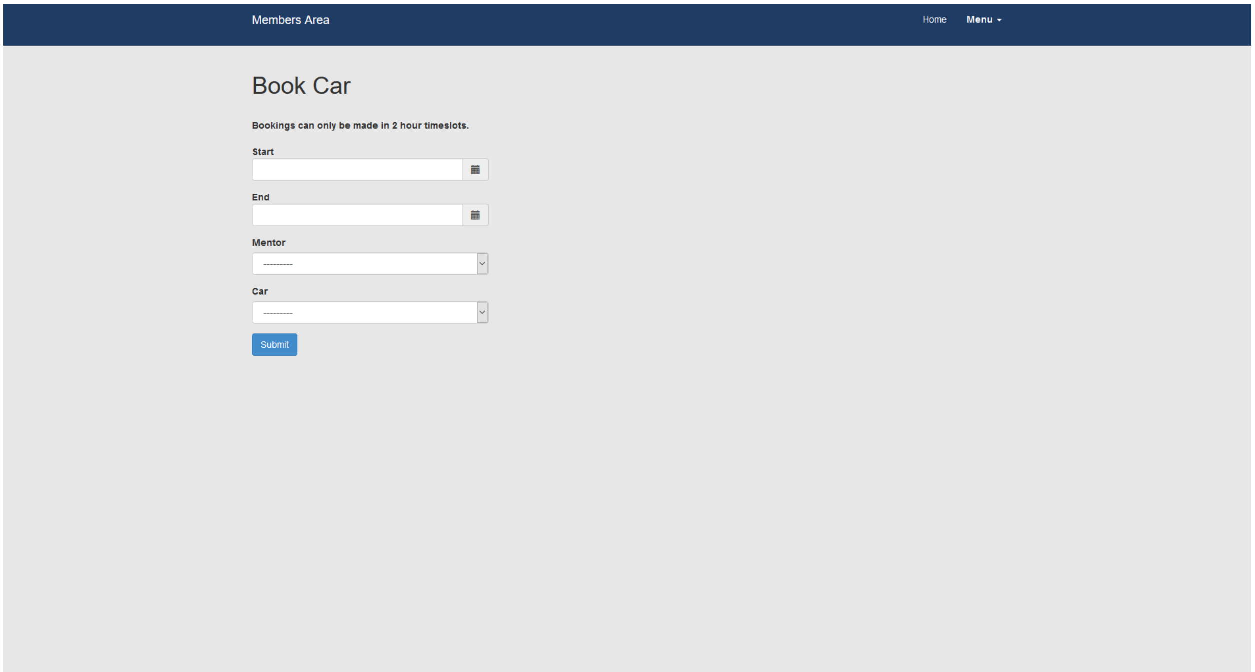
1. Login using your account



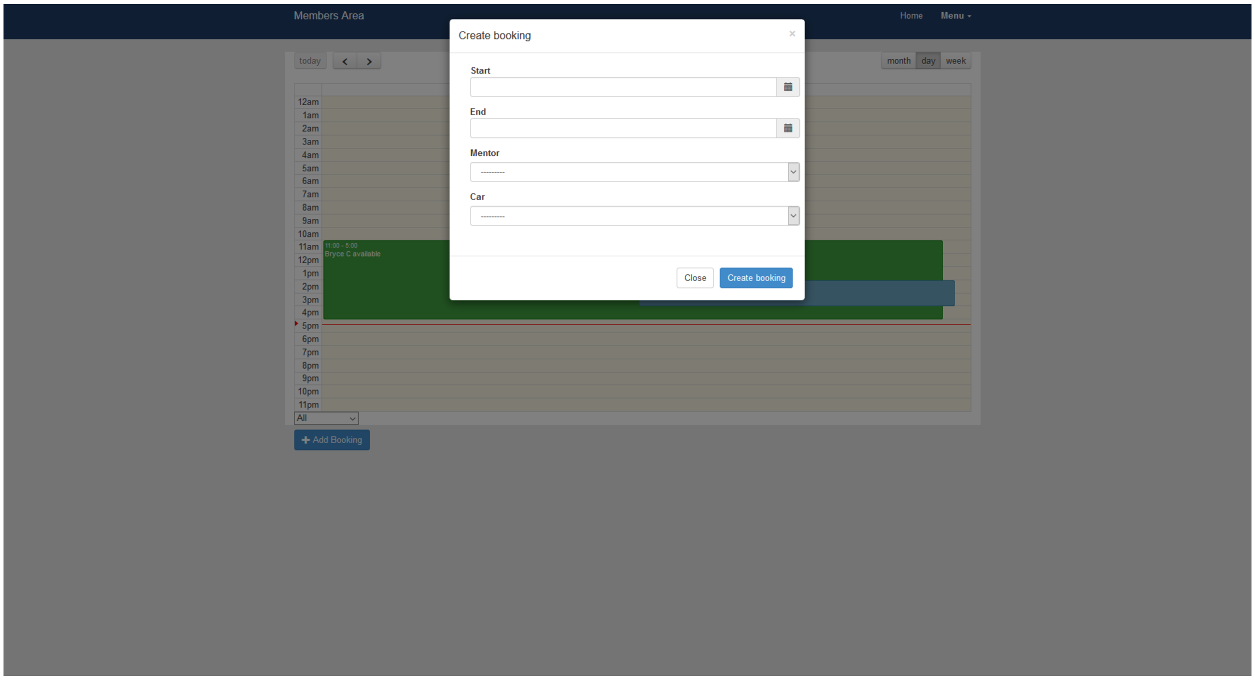
Raymond Terrace

Driver Training Programme

2. Open the menu on the top right of the page. Click ‘Create Booking’ or ‘View Calendar’. A booking can be created from either of these pages. The Calendar view is recommended so that you can view current bookings and availabilities for mentors.



Bookings can only be made in 2 hour timeslots.



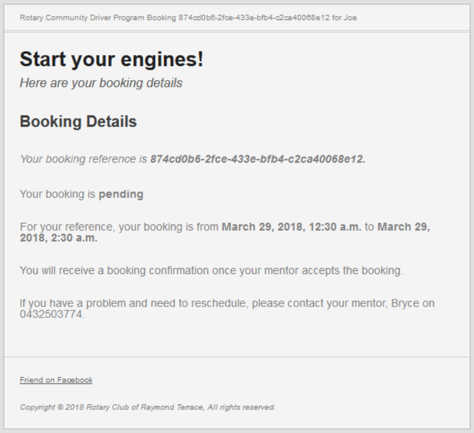
3. Enter a start time for the booking. An end time will be automatically populated for you. Select a mentor (the mentor must be available to create a booking). Select a car. The system will produce errors in the following cases:

   - There is less than 30 minutes between bookings
   - The booking clashes with another booking
   - The proposed booking date/time is outside business hours (9am - 8pm)
   - The selected mentor is not available or booked for the proposed booking date/time
   - The selected car is booked during the proposed booking date

- The booking is in the past
- The booking is > 6 weeks ahead

A success message will display on booking creation.

4. You will receive a booking creation email, with details about the pending booking.



Rotary Community Driver Program Booking 874cd0b6-2fce-433e-bfb4-c2ca40068e12 for Joe

Start your engines!

Here are your booking details

Booking Details

Your booking reference is ***874cd0b6-2fce-433e-bfb4-c2ca40068e12.***

Your booking is **pending**

For your reference, your booking is from **March 29, 2018, 12:30 a.m.** to **March 29, 2018, 2:30 a.m.**

You will receive a booking confirmation once your mentor accepts the booking.

If you have a problem and need to reschedule, please contact your mentor, Bryce on 0432503774.

Friend on Facebook

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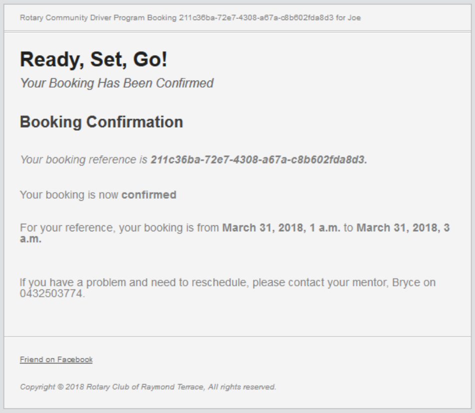
5. Once the mentor accepts the booking, you will receive a booking confirmation email.



Rotary Community Driver Program Booking 211c36ba-72e7-4308-a67a-c8b602fda8d3 for Joe

Ready, Set, Go!

Your Booking Has Been Confirmed

Booking Confirmation

Your booking reference is ***211c36ba-72e7-4308-a67a-c8b602fda8d3.***

Your booking is now **confirmed**

For your reference, your booking is from **March 31, 2018, 1 a.m.** to **March 31, 2018, 3 a.m.**

If you have a problem and need to reschedule, please contact your mentor, Bryce on 0432503774.

Friend on Facebook

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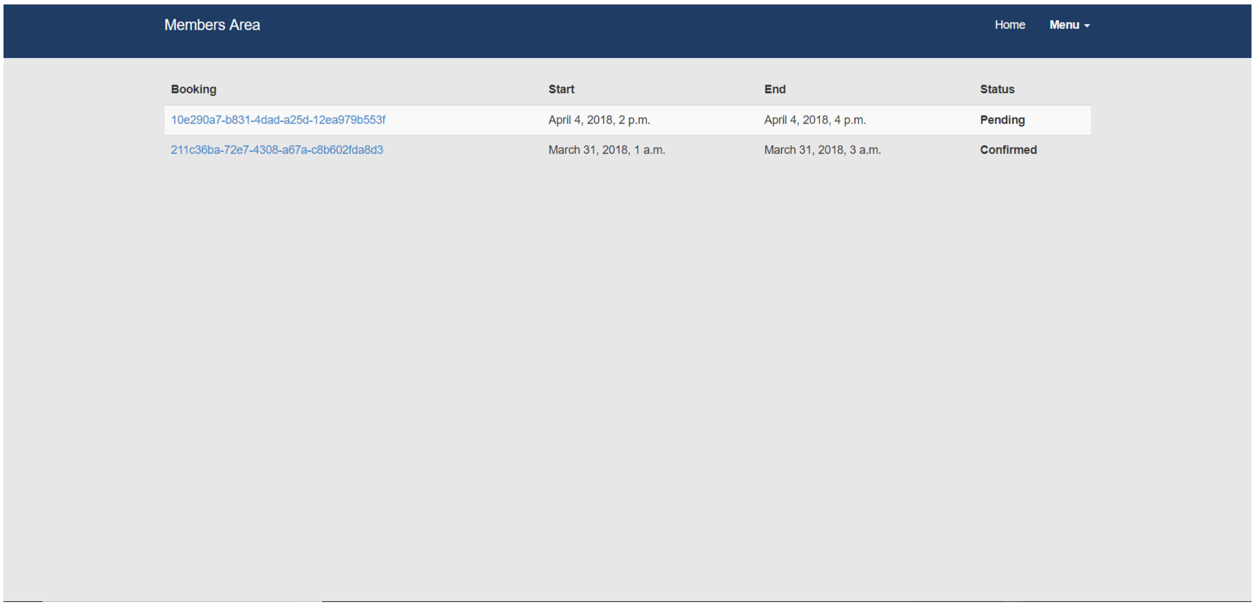
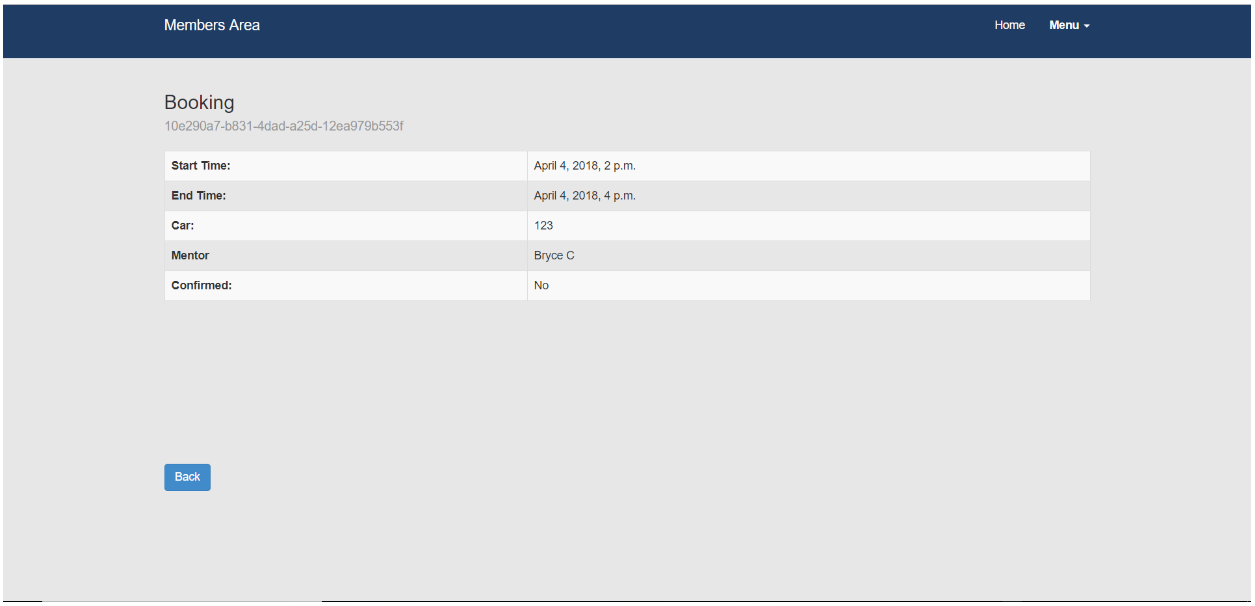
1.2.4 How to View Bookings

1. Login to your account
2. Open the menu and select ‘View Bookings’
3. Here you can see a list of bookings and their status



Booking	Start	End	Status
10e290a7-b831-4dad-a25d-12ea979b553f	April 4, 2018, 2 p.m.	April 4, 2018, 4 p.m.	**Pending**
211c36ba-72e7-4308-a67a-c8b602fda8d3	March 31, 2018, 1 a.m.	March 31, 2018, 3 a.m.	**Confirmed**

4. To view more details about a specific booking, click on its booking ID



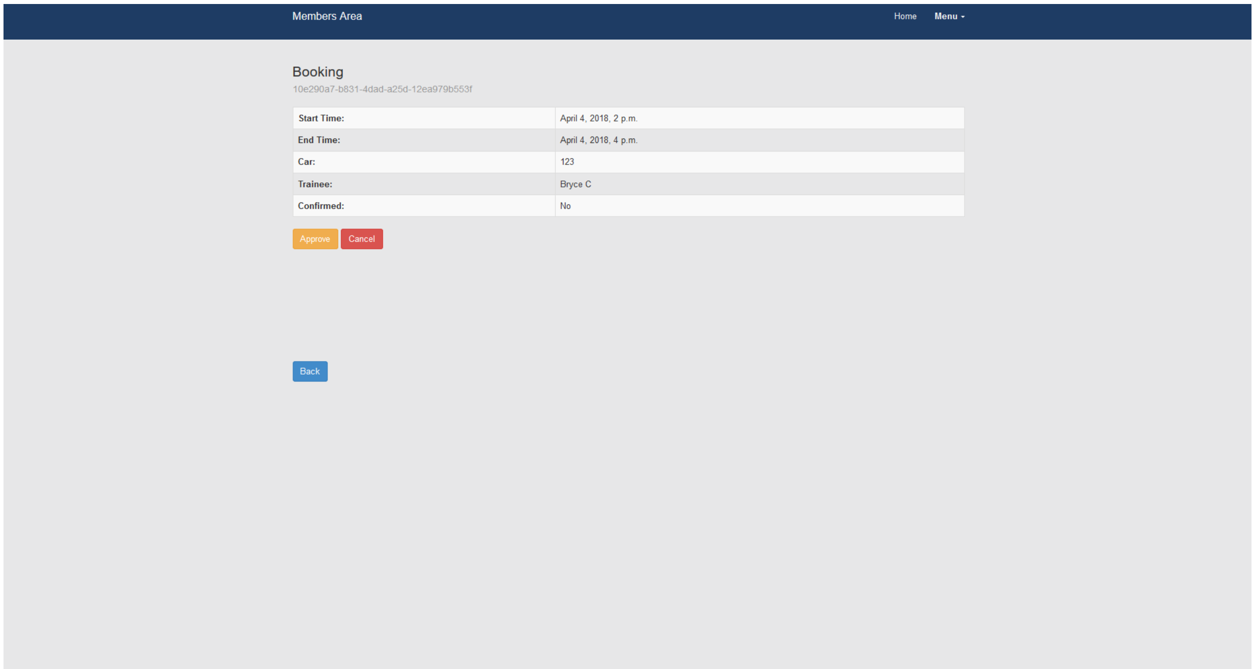
Booking

10e290a7-b831-4dad-a25d-12ea979b553f

Start Time:	April 4, 2018, 2 p.m.
End Time:	April 4, 2018, 4 p.m.
Car:	123
Mentor	Bryce C
Confirmed:	No

1.2.5 (Mentors) How to Approve Booking Request

1. Login to your account
2. Open the menu and click 'View Bookings'
3. Select a pending booking and click 'Approve'



Booking

10e290a7-b831-4dad-a25d-12ea979b553f

Start Time:	April 4, 2018, 2 p.m.
End Time:	April 4, 2018, 4 p.m.
Car:	123
Trainee:	Bryce C
Confirmed:	No

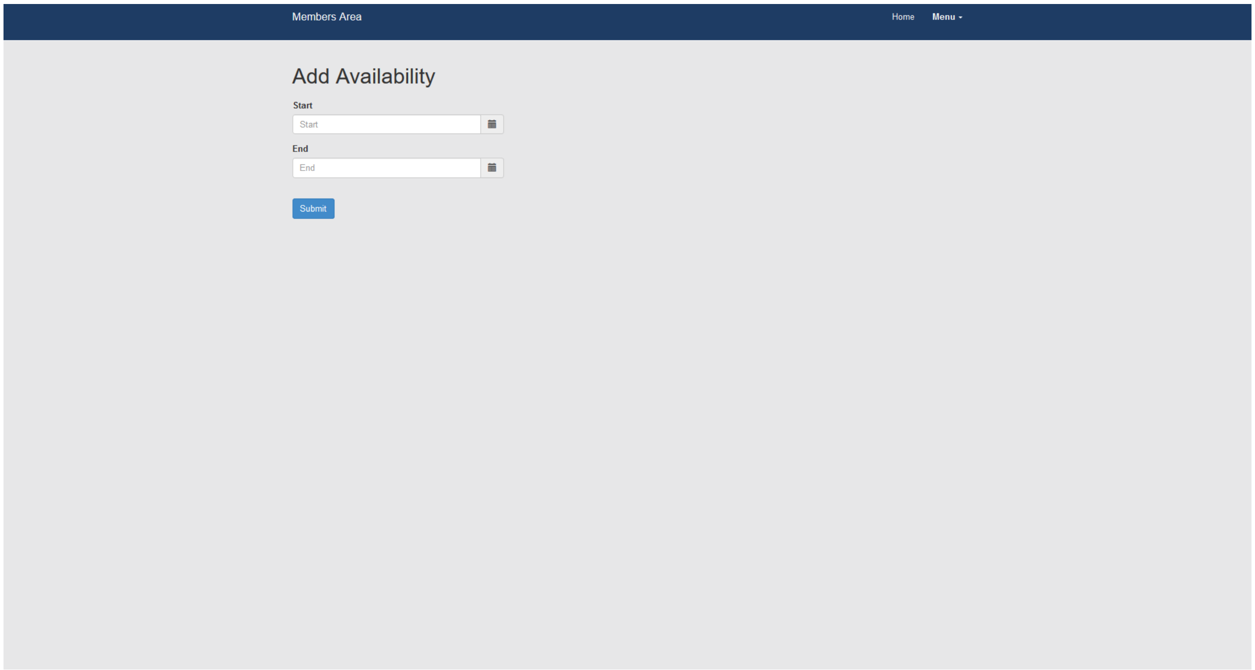
4. You will receive a confirmation email

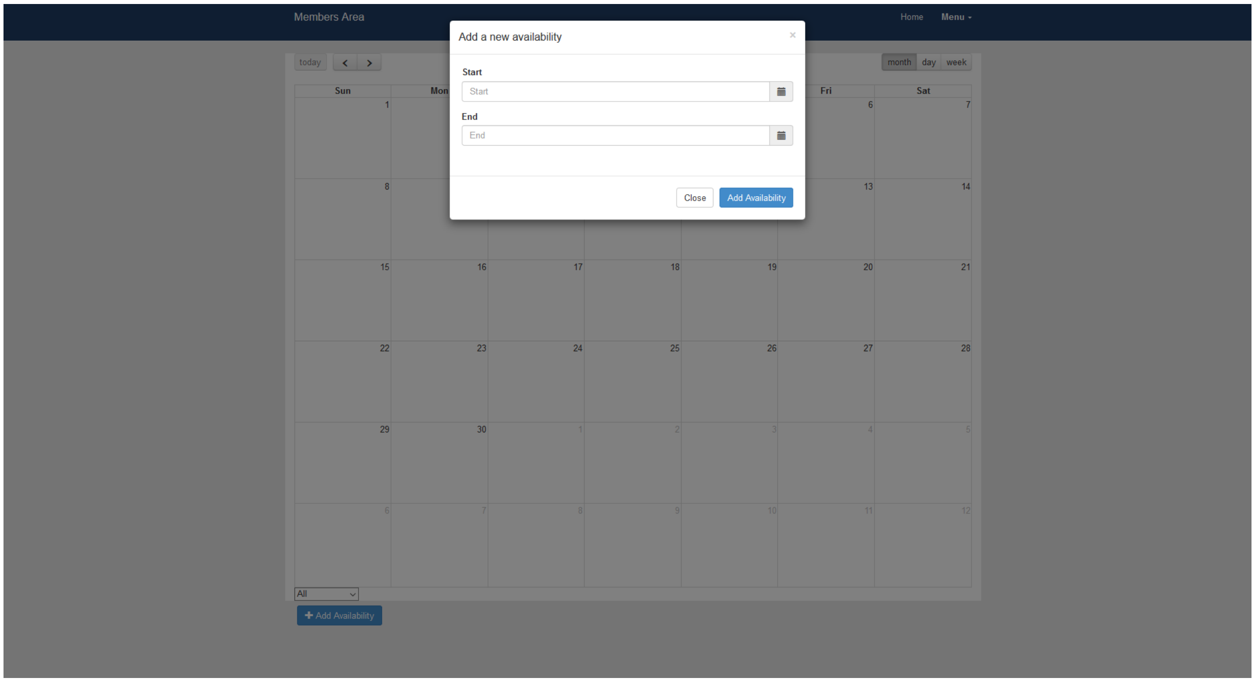
1.2.6 (Mentors) How to Cancel Booking Request

As above, only select 'Cancel' on the booking detail page. You, and the student will receive a cancellation email.

1.2.7 (Mentors) How to Enter Availabilities

1. Login to your account
2. Open the menu, slect 'Add Availaility' or 'View Calendar'. An availability can be added from either of these pages.





3. **Select a start and end date for your availability. Availabilities are limited to 12hrs, and must be within business hours (9am**
   The system will generate errors in the following cases:
   - The start and end date are the same
   - The end date is before the start date
   - The availability is in the past
   - The availability is > 6 weeks in the future
4. You will see a success message upon submit

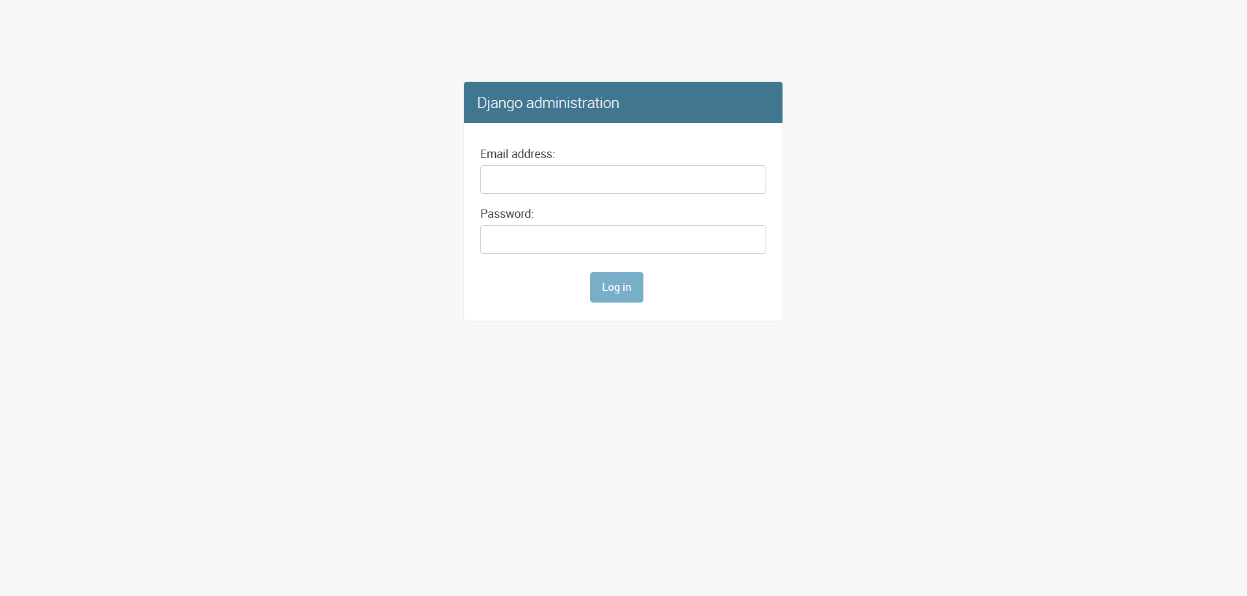
1.3 System Administrators Guide

1.3.1 Introduction

The system admin has the ability to make new users, edit their information and to delete user accounts.

1.3.2 How to Add a New System Admin

1. Login to django admin (url/admin)

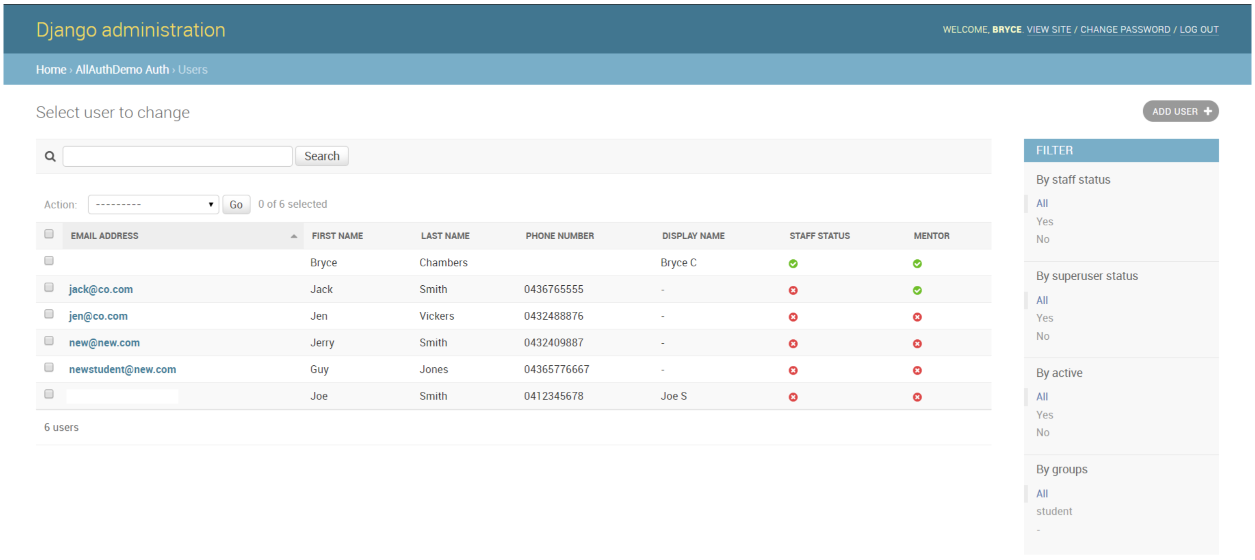


Django administration

Email address:

Password:

2. Click 'Add User' on the top right of the page



Django administration
WELCOME, BRYCE. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › AllAuthDemo Auth › Users
ADD USER ✚
Search
Go
FILTER

Select user to change

Action: --------- 0 of 6 selected

☐	EMAIL ADDRESS	FIRST NAME	LAST NAME	PHONE NUMBER	DISPLAY NAME	STAFF STATUS	MENTOR
☐		Bryce	Chambers		Bryce C	✓	✓
☐	jack@co.com	Jack	Smith	0436765555	-	✗	✓
☐	jen@co.com	Jen	Vickers	0432488876	-	✗	✗
☐	new@new.com	Jerry	Smith	0432409887	-	✗	✗
☐	newstudent@new.com	Guy	Jones	04365776667	-	✗	✗
☐		Joe	Smith	0412345678	Joe S	✗	✗

6 users

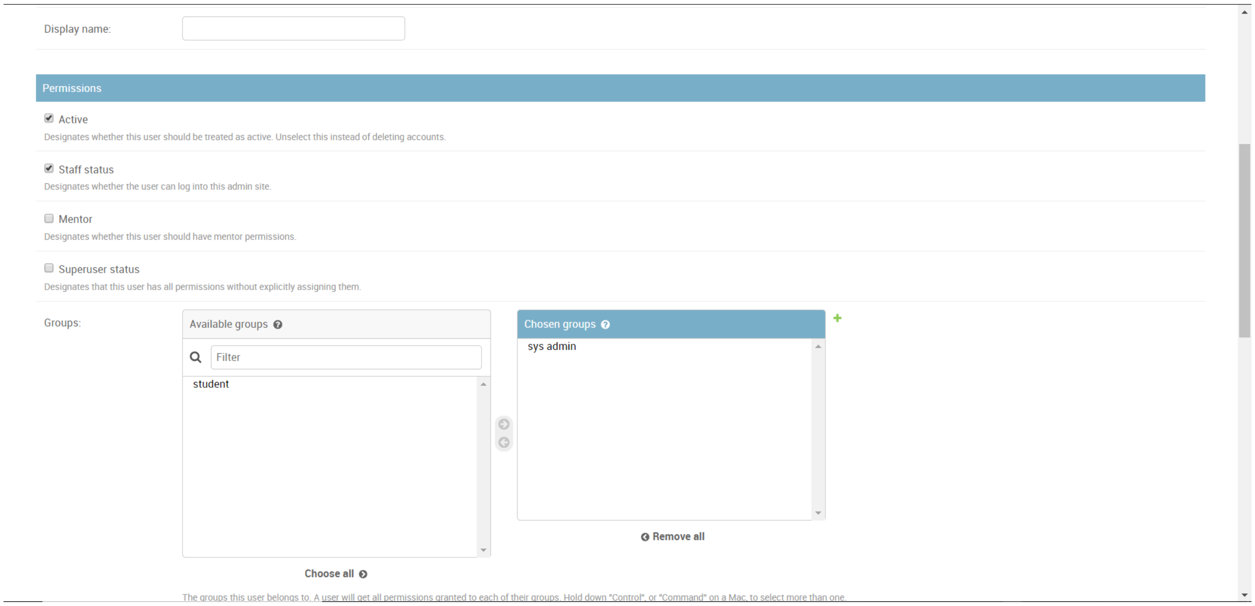
By staff status
All
Yes
No

By superuser status
All
Yes
No

By active
All
Yes
No

By groups
All
student
-

3. Enter the users details and save



Display name:

Permissions

☑ Active

Designates whether this user should be treated as active. Unselect this instead of deleting accounts.

☑ Staff status

Designates whether the user can log into this admin site.

☐ Mentor

Designates whether this user should have mentor permissions.

☐ Superuser status

Designates that this user has all permissions without explicitly assigning them.

Groups:

Available groups: student

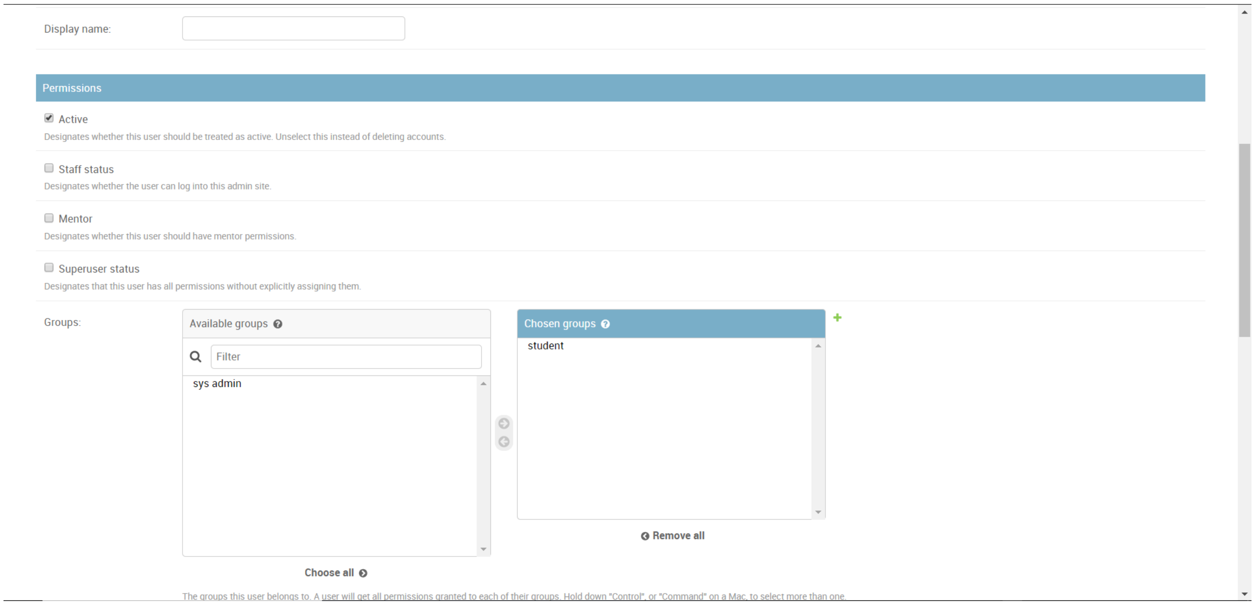
Chosen groups: sys admin

The groups this user belongs to. A user will get all permissions granted to each of their groups. Hold down "Control", or "Command" on a Mac, to select more than one.

4. On the next page, scroll down and select 'Staff Status' and sys admin group, then save

1.3.3 Adding Students

Same process as above, except select 'student' group



Display name:

Permissions

☑ Active

Designates whether this user should be treated as active. Unselect this instead of deleting accounts.

☐ Staff status

Designates whether the user can log into this admin site.

☐ Mentor

Designates whether this user should have mentor permissions.

☐ Superuser status

Designates that this user has all permissions without explicitly assigning them.

Groups:

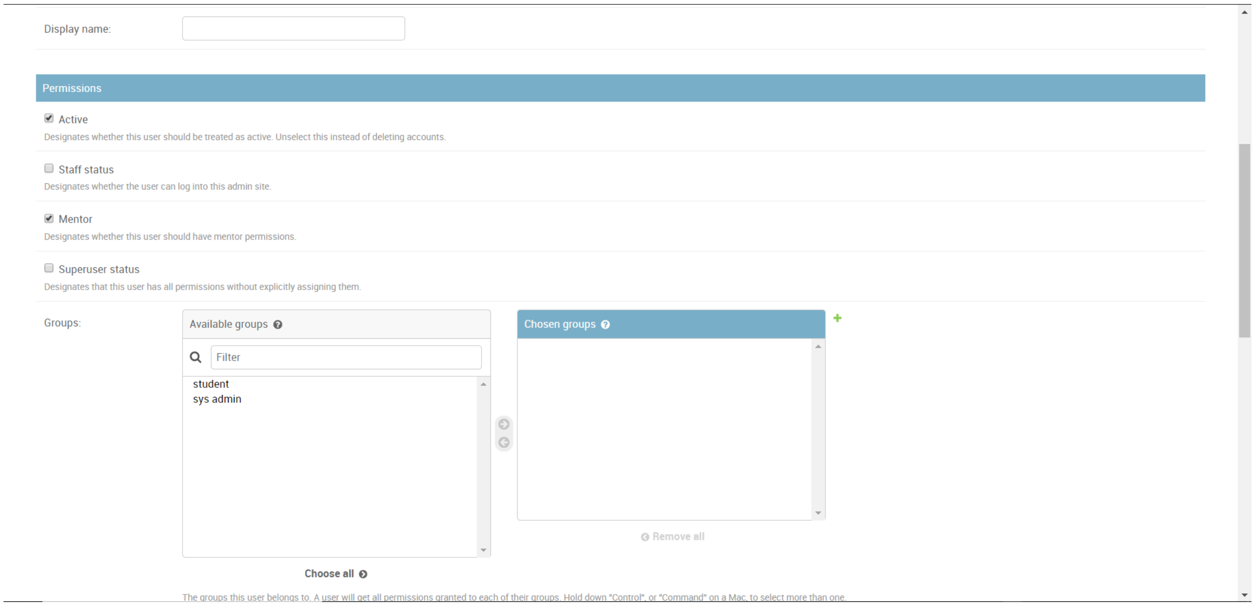
Available groups: sys admin

Chosen groups: student

The groups this user belongs to. A user will get all permissions granted to each of their groups. Hold down "Control", or "Command" on a Mac, to select more than one.

1.3.4 Adding Mentors

Same process as above, except select 'Mentor'



Display name:

Permissions

☑ Active

Designates whether this user should be treated as active. Unselect this instead of deleting accounts.

☐ Staff status

Designates whether the user can log into this admin site.

☑ Mentor

Designates whether this user should have mentor permissions.

☐ Superuser status

Designates that this user has all permissions without explicitly assigning them.

Groups:

Available groups

- student
- sys admin

Chosen groups

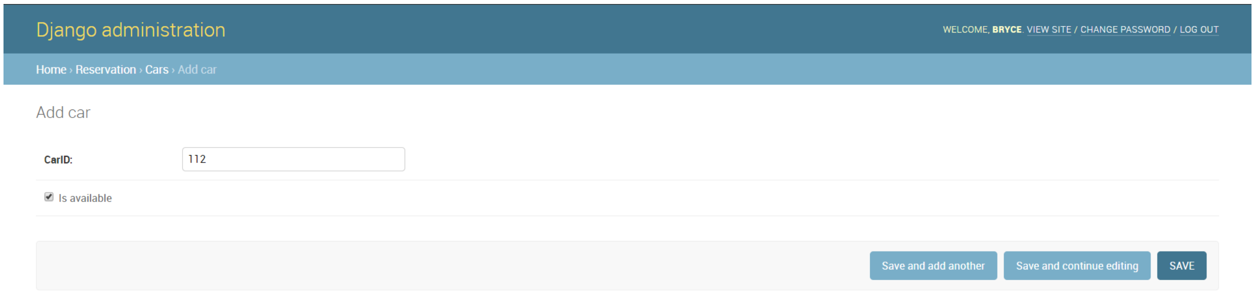
The groups this user belongs to. A user will get all permissions granted to each of their groups. Hold down "Control", or "Command" on a Mac, to select more than one.

1.3.5 How to Remove User

1. Login to django admin (url/admin)
2. Open the users table
3. Click the name of the user you want to remove
4. Click the ‘Delete’ button
5. Confirm deletion

1.3.6 How to Add a Car

1. Login to django admin (url/admin)
2. Open the Car table
3. Select ‘Add Car’ in the top right hand corner
4. Enter a CarID and tick ‘is_available’



Django administration

WELCOME, BRYCE. VIEW SITE / CHANGE PASSWORD / LOG OUT

Home › Reservation › Cars › Add car

Add car

CarID: 112

☑ Is available

5. Save

Note: if a car does not have is_available ticked, the system will assume the car is not available. It will not be displayed for booking to users.

1.4 Technical Document

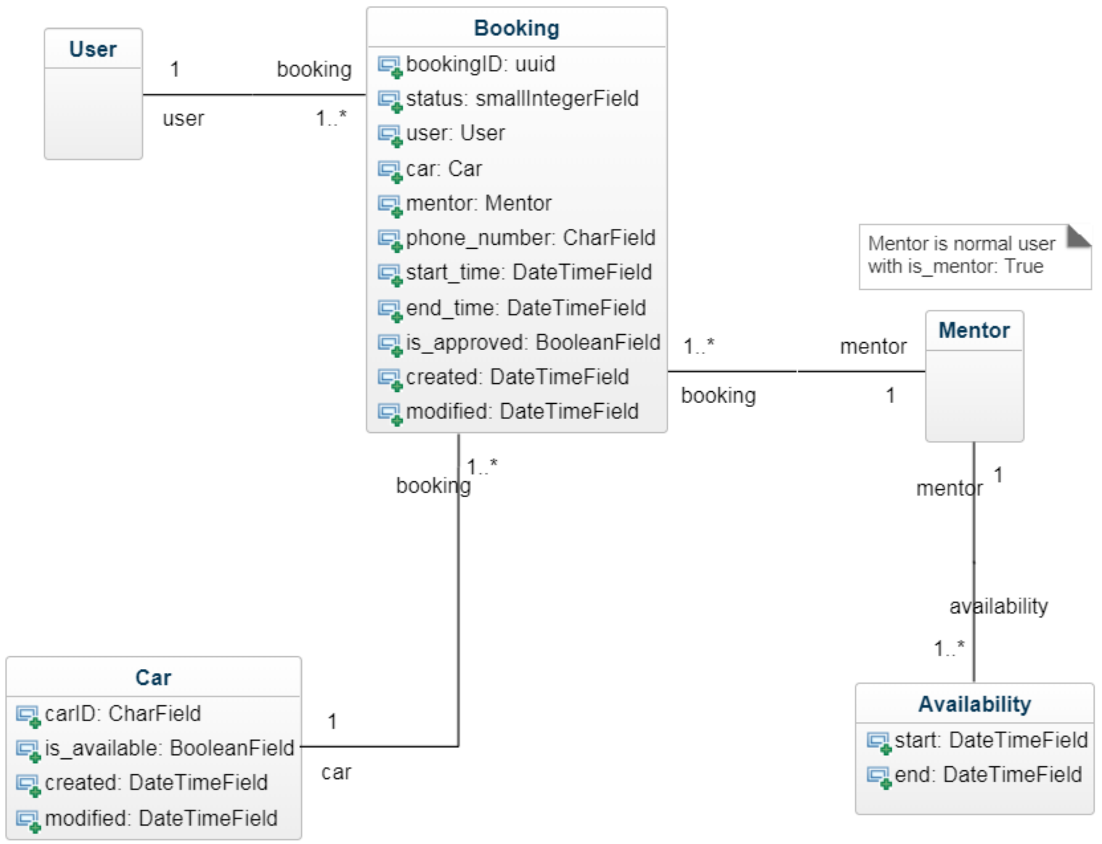
1.4.1 Introduction

The program is composed of different modules, classes, and tools for the software itself to be fully functional. Its components, their relationships, and their features are described in this portion, as well as the dependencies used for optimal end-product utilization.

1.4.2 Database Schema

The database schema presents the relationships between the classes (relations) involved in the system's backend. It also includes the fields of each class and how they interact with other classes.

The following figure shows the initial database schema of the system.



The class diagram abov details objects in the database. It also shows how a booking is created and how it is approved by the mentor. For a reservation to be instantiated, the booking class needs a car, user, mentor, start_time and end_time. Validation for car availability and conflicting bookings is performed in Forms.py and Models.py rather than in the Booking class itself.

1.4.3 Modules

Current:

auth

forms.py

- user registration form

views.py

- add user(s)
- view user(s)

models.py

- user attributes reflected in database

urls.py

- reference for user navigation on the website

reservation

forms.py

- reservation form
- availability form

views.py

- add reservation(s)
- view reservation(s)
- show reservation(s) status
- change reservation(s) status

models.py

- reservation attributes reflected in database

urls.py

- reference for user navigation on the website

1.4.4 Dependencies

Database

PostgreSQL (Postgres) - An object-relational database management system (ORDBMS) used to store and retrieve data securely. - The extensibility, reliability, stability, and compatibility of PostgreSQL are the key reasons why it was chosen as the project database server.

Django_post-office

- A Django application that queues emails and sends them at user-defined intervals (i.e. every X minutes via cron)
- It provides logging abilities and the ability to view sent emails
- It allows html and plain text email templates to be stored in the database
- https://github.com/ui/django-post_office

Django-Bootstrap-Form

- Allows for bootstrap-styled forms without large amounts of css
- Uses filters inside curly braces, i.e. {{ form.car|bootstrap }}
- https://django-bootstrap-form.readthedocs.io/en/latest/#installation

Django-bootstrap3-datetimepicker

- A form widget that allows for easy integration of a bootstrap3 datetimepicker
- Used on availability forms, booking forms use (https://github.com/Eonasdan/bootstrap-datetimepicker) instead due to javascript requirements to populate end_time

- https://github.com/inducer/django-bootstrap3-datetimepicker

Bootstrap 3

- The majority of the site is styled using bootstrap3, without it the site will not be styled as intended, and functionaility may be impeded