

# **Administrator Guide**

**Electrical and Electronics Engineering**

**Lab Booking System**

# **Preface**

## **Purpose of writing**

This is the operational guide of Lab Booking and attendance systems. It will provide a detailed explanation about the functions of the system and instructions about how to use the system efficiently.

## **Expected Reader**

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# 1. Administrator Booking

## 1.1 Registration and Login

As an administrator, you do not need to register. You will have a unique administrator account for the system, which allows you to access the website directly by the IP address(<http://localhost:8080/admin>). You are supposed to see the following page after that. There are four main functions for you, which are “Display All Student”, “Edit User”, “Admin Booking” and “Display All Bookings”.



## 1.2 Edit User

If you would like to edit the information that you provided when you registered for the system, you can go to “Edit User” page. You can change your first name, last name, UCARD number and email address. When you make a final decision, you just need to submit the updated information. You can return to the home page after completing the whole process.

## 1.3 Booking seats

As an administrator, you can book all seats for teaching purpose in the following page by ticking the box next to “Select”, not just one.

### Time slot

Start time: 9 :00 to End time: 10 :00

☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday

[click here to see floor plan](#)

Seat	Status	Select
A1	Available	<input type="checkbox"/>
A2	Available	<input type="checkbox"/>
A3	Available	<input type="checkbox"/>
B1	Available	<input type="checkbox"/>
B2	Available	<input type="checkbox"/>
B3	Available	<input type="checkbox"/>
B4	Available	<input type="checkbox"/>
B5	Available	<input type="checkbox"/>
B6	Available	<input type="checkbox"/>
C1	Available	<input type="checkbox"/>
C2	Available	<input type="checkbox"/>
C3	Available	<input type="checkbox"/>
C4	Available	<input type="checkbox"/>
C5	Available	<input type="checkbox"/>
C6	Available	<input type="checkbox"/>
D1	Available	<input type="checkbox"/>
D2	Available	<input type="checkbox"/>
D3	Available	<input type="checkbox"/>
D4	Available	<input type="checkbox"/>

In addition, you can see all booking information by going to “Display all Bookings” page. If the seats and equipments are not enough or the lab is booked for teaching purpose, you can remove bookings from any student to meet your needs.

### All Booking Slots

[Return Admin Home](#)

Booking Reference	student	seatNo	Start Time (am)	End Time (am/pm)	Length	Prototyping Board	Solid Core Wire	Wire Cutter	Resistors	Capacitors	TTI LCR400 Bridge	BNC "T" Piece	Oscilloscope Probes	Active 8 Channel Logic Probe	Waveform Generator : BNC @ Croc Lead	Waveform Generator : BNC @ BNC Lead	NGE 100 Triple Output Power Supply	HMC 8012 Digital Multimeter	Trim Tool	Attendance	Notes	Edit
2	1	B3	26/04/2019, 09:00:00	2019-04-26T10:00:00	1 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	false		<a href="#">Delete</a>
5	3	H4	25/04/2019, 09:00:00	2019-04-25T10:00:00	1 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	false		<a href="#">Delete</a>
7	4	C6	25/04/2019, 09:00:00	2019-04-25T10:00:00	1 hr	0	0	0	0	0	1	0	0	0	0	0	0	0	0	false		<a href="#">Delete</a>
8	6	A1	30/04/2019, 09:00:00	2019-04-30T10:00:00	1 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	false	hi	<a href="#">Delete</a>
10	9	A1	29/04/2019, 09:00:00	2019-04-29T10:00:00	1 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	false		<a href="#">Delete</a>
11	0	A3	30/04/2019, 10:00:00	2019-04-30T12:00:00	2 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0			<a href="#">Delete</a>
12	0	B1	30/04/2019, 10:00:00	2019-04-30T12:00:00	2 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0			<a href="#">Delete</a>
15	13	B1	26/04/2019, 12:00:00	2019-04-26T13:00:00	1 hr	0	1	0	0	1	0	0	0	2	0	0	0	0	0	false		<a href="#">Delete</a>
16	0	A1	02/05/2019, 09:00:00	2019-05-02T10:00:00	1 hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0			<a href="#">Delete</a>

## 1.4 Student Management

As an administrator, you can go to “Display all student” page to see the current booking slot and manage bookings of students. You can add strikes and remove strikes according to their attendance. Additionally, you can delete their booking if there is no space available or no equipments available.

### Current Booking Slots

#### List of all Users

ID	Name	Lastname	Course	Email	Username	Strikes	Add Strikes	Remove Strikes	Edit
19	Zen	Test	EE	test@bristol.ac.uk	zen	0	<a href="#">Add Strike</a>	<a href="#">Remove Strike</a>	<a href="#">Delete</a>
20	test	testty	EE	dr@bristol.ac.uk	logic	0	<a href="#">Add Strike</a>	<a href="#">Remove Strike</a>	<a href="#">Delete</a>

[Return Admin Home](#)

## 2. Sever Update and Security

### 2.1 Sever Update

When you updating a latest version project on the server, firstly, you need to use the following command to access the server. Then you need to clone it to the folder called LABBOOKING in the server and use the following command to build and run the maven project.

Command for accessing the server: ssh -i ~/.ssh/id\_rsa ubuntu@129.213.98.201

Command for building: mvn clean package -DskipTests=True

Command for running: java -jar target/springboot-youtube-amegoscode-1.0-SNAPSHOT.jar

If you can run it on the server successfully, you can use a service called Lab to run it. There are 4 commands you need to use in order to finish the updating process.

Command for stopping the current running process: sudo service LAB stop

Command for reloading the new project: sudo systemctl daemon-reload

Command for restarting the service: sudo service LAB restart

Command for changing owner: sudo chown LAB:LAB springboot-youtube-amegoscode-1.0-SNAPSHOT.jar

Command for changing mode: sudo chmod 500 springboot-youtube-amegoscode-1.0-SNAPSHOT.jar

### 2.2 Server Security

There are several points about the security of the server that you need to know:

#### 1. Password

With the popularity and simplicity of web development, there are a larger amount of useful website in our daily life. In order to guarantee the security of our website, it is crucial to have a reliable password. During our development process, we have many considerations about how to choose a strong password for the server. For example, we considered that it is useful to have a long password, which means that it should be longer than 12 characters. In addition, we can just have a unique password. That is to say, we are not allowed to use the password in other places. It needs to be protected firmly. However, finally, we decided to use another technical method. To be more specific, in order to mask our password, we create a file called .secret.properties in user/home/ in the terminal. Then we write our real password into this file. At the same time, we write the property sources in Main.java file, which is used to specify the path of the .secret.properties file in our project. Therefore, when we use the main function to run the whole project, it tends to find the password in .secret.properties firstly in order to connect to database. As a result, it will be really hard for a program-tracking programs to crack our password.

#### 2. User Access Privilege

The main function of our website is to provide a lab booking platform for the student in University of Bristol. At the same time, it should be easier for administrator to manage all booking request from students. It is important that every user has an appropriate permission about the task they do. For example, on our website, we set different privileges for students and administrators. To be more specific, they will have totally different index page after logging in to our website. In terms of the functions on different index page, student can book seats and experimental tools. However, if you login to the website using an administrator account, you can see all booking information and modify the availability of seats and experimental tools. In the meantime, you can book all the seats for some training classes and you can also delete some bookings from students. Furthermore, it is necessary to ensure that each account can only be used by one user. It will be considerably difficult for us to detect which person is responsible for mistakes if we do not have separate account.

### 3. Backup the website

There are increasing number of hackers who always try to attack websites. It is crucial to have an off-site backup of the website. During our development process, we considered that we need to have a backup website on the server although we always run the current project, which is really useful when some files is damaged during our development process or attacked by hackers. However, we decided to backup our website off-site after deep thinking. Due to the backup website have unpatched versions, which means that it is very easy for attackers to access our server. And the most important thing is that we need to make the backup website can be run. By doing this, we can recover files from a point before the hack occurred.