

# **Barbershop Made Easy Reference Manual**



Professional Hygiene Appointment Management Program  
Towson University

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## Team Members

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## Overview

The purpose of this document is to provide clear instructions on how to deploy the web application and database required for the application. It also describes how to use the implemented functions within the web application used for administering clients, employees, and their appointments. The web application allows staff to enter in a new appointment using user information, update an existing appointment if any changes need to be made, and get results from queries such as what day an employee has off during the week. The functionality is split between creating an appointment, updating appointments, services, clients, and employees. Each contains their own special functions and queries to get the required information that needs to result from their corresponding queries.

## Deploy Ubuntu

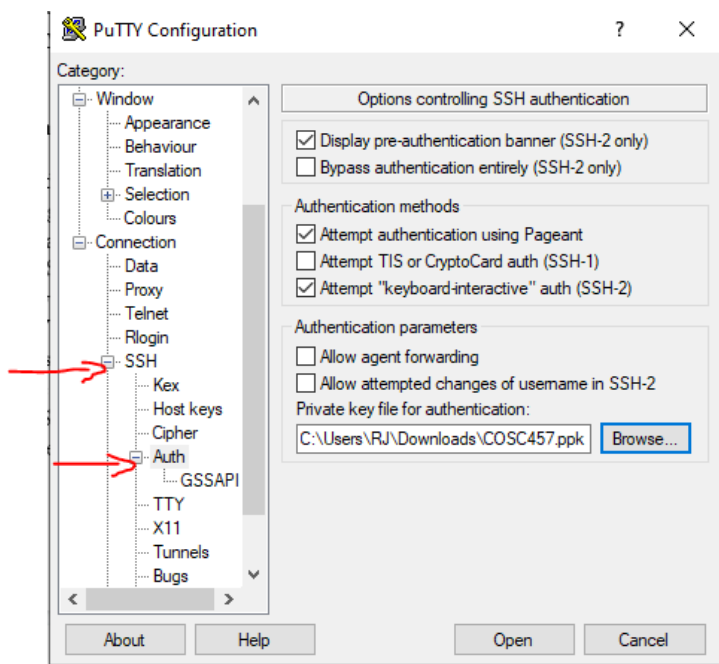
Ubuntu 20.04 is the operating system required to run the web application. Ubuntu was chosen because of its security, speed, updates and supported software. Download the Ubuntu 20.04 iso from the official Ubuntu website at <https://releases.ubuntu.com/20.04/>. After it's downloaded you can deploy it in the hypervisor of your choice such as Proxmox, VMWare Workstation, ESXI, etc. In this example, we will use VMWare. In VMWare, click New Virtual Machine → Custom(Advanced) → Click Next → Click Next again → Click Browse → insert the ubuntu iso → Click Next → enter a username and password → give the virtual machine a name and select your desired location to save it → Enter desired number of processors and number of cores per processors → Enter the desired amount of ram → Select the option “Use network address translation (NAT)” → Click Next → select compatible I/O controller → Click Next → For disk type choose “SCSI” → Create a new virtual disk → Enter desired disk size → Enter the name of the disk file → Click Next → Click Finish

## Deploy Ubuntu on AWS

Many prefer to use a cloud-based service if they cannot host the virtual machine locally. If this is the case, sign into your AWS account and expand the service dropdown menu. Click **EC2** as we will create an EC2 instance. You will now be redirected to the EC2 Dashboard. Click the orange button that says **Launch instance**. Scroll down to where it says, “Ubuntu Server 20.04 LTS (HVM), SSD Volume Type” and ensure it is the free tier. Click the blue button that says, “Try it Out”. Create your private key then launch the instance!

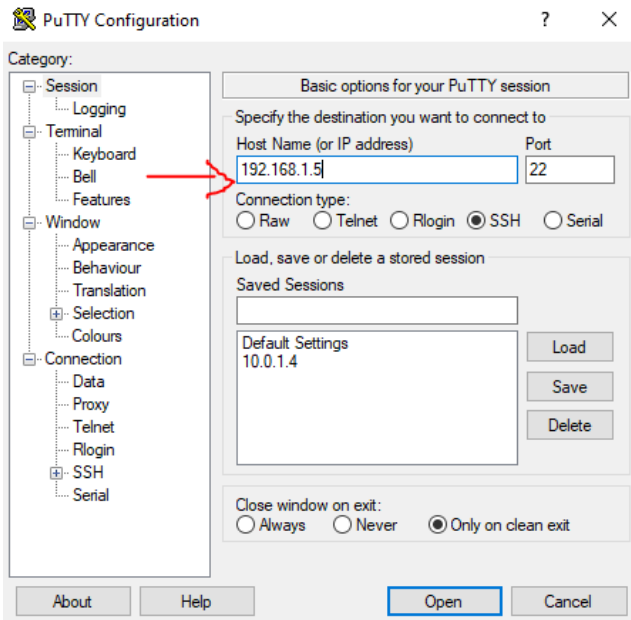
## SSH into the Virtual Machine (AWS)

1. On your windows computer, download the SSH client puTTY from <https://www.putty.org/>
2. Open the program named **puttygen**
3. Click “Load an existing private key file”
4. Then Click “Save Public Key” and enter a passphrase
5. Now you have the .pem public key file required for SSH
6. Open PuTTY
7. Where it says **Host Name (or IP address)**, enter the public IP of the AWS instance which can be found in the AWS EC2 Instances dashboard
8. Navigate to SSH --> Expand the plus sign symbol --> Auth --> Browse and load the public key we generated
9. Click Open
10. Username: ubuntu passphrase: <whatever you set>
11. Now you are SSH'd in!



## SSH into VMWare Virtual Machine

1. Open PuTTY on your windows machine
2. Enter the IP of the Ubuntu machine in the Host Name box



3. Click Open
4. Enter the password of the virtual machine
5. You are now SSH'd in!

## Deploying the Web Application

In order to download the web application, you must first install the git package from the ubuntu repository.

1. Run the command **sudo apt install git**.
2. Let it install then clone the project into your current directory by running the following command: **git clone <https://github.com/megatop1/COSC457.git>**.
3. Download the apache2 web server: **sudo apt install apache2**
4. Enable the apache2 service to survive a system reboot: **systemctl enable apache2**
5. Start the apache2 service: **systemctl start apache2**
6. Now that the web server is installed, mv the project into the web root directory: **mv COSC457 /var/www/html**
7. Install the required PHP packages which include PHP, the PHP mysql database module, and the database connection module: **sudo apt install php php-mysql pdo\_mysql**
8. Open a web browser and navigate to the front end. `<hostname>/cosc457-project/barber/`

## Install MariaDB

Our database platform is mariaDB.

1. Update the system: **sudo apt update**
2. Install MariaDB Server: **sudo apt install mariadb-server**
3. Run the included `mysql_secure_installation` security script to restrict access to the server. This is so the server can have enhanced security. This removes the test database, extra uses, and performs basic additional hardening: **sudo mysql\_secure\_installation**
4. This will take you through a series of prompts where you can make some changes to your MariaDB installation's security options. The first prompt will ask you to enter the current database root password. Since you have not set one up yet, press ENTER to indicate "none".
5. The next prompt will ask you to Remove anonymous users. Enter Y
6. Disallow root login remotely? Enter Y
7. Remove the test database and access to it? [Y/n] Y
8. Reload privilege tables now? [Y/n]: Y
9. Enable the mariadb service so the service will survive a reboot: **systemctl enable mariadb**

## Deploy the database

1. Open the following URL on a web browser to automatically run the script to create our database and connect it to the front end: `<hostname>/cosc457-project/barber/install.php`
2. If it says **success** then the database has successfully been creating and configured to the front end.
3. Open the MySQL CLI: **sudo mysql -u root -p**
4. Create a database user which will connect the front end to the back end: **a. CREATE USER `barber`@`localhost` IDENTIFIED BY `towson`;**
5. Give our database full access to databases locally: **a. GRANT ALL PRIVILEGES ON \*.\* TO 'barber'@'localhost';**

## Check Which Employees are off on a Certain Day of the Week

### ❖ Purpose

The ability to check the availability of employees is very important from an administrative viewpoint; employee availability equates to customer satisfaction. This function also allows the administrative staff to decide to make decisions about the quantity of employees.

### ❖ Ideal Use

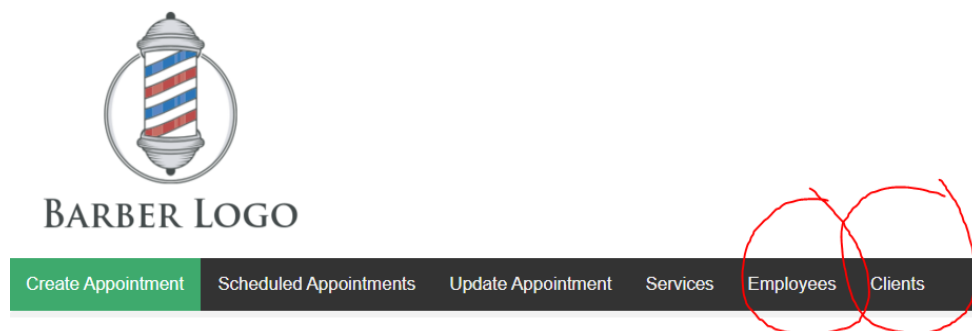
The ideal use of this function is for the manager to create a schedule of all the employees based on their availability and what is best for the business.

#### ➤ Ideal User

Management and Clients

### ❖ Steps to effectively utilize feature

1. For this example, Employee has been chosen. To select employee, please use the mouse to click to navigate to the employee page



- For this example, find employee information has been chosen. To select example Filter Employee per job title, please use the mouse to click to navigate to the employee page



## BARBER LOGO

Create Appointment   Scheduled Appointments   Update Appointment   Services   Employees   Clients

- [Find Employee Information by Entering First and Last name](#)
- [Filter employee per job title](#)
- [Check which employees are off on a certain day of the week](#)

- To select check which employees are off on a certain day of the week, please use the mouse to click to navigate to the third bulletin.
- Enter the day of the week which you would like to see which employees are scheduled off.

### Find Which Employees Are Off On A Specific Day

Day of Week

Tuesday |

[Back to home](#)

View Results

- Click view results to see the generated list.

### Results

Position	DaysOff	EmployeeID	FirstName	LastName
Janitor	Tuesday	6	Garett	Welch
Esthetician	Tuesday	10	Kira	Pagac



## **Create Appointment**

### **❖ Purpose**

The ability for the staff to create appointments is vital to the business's successful operation. This allows the staff to create appointments so the barbershop can be as efficient and convenient as possible.

### **❖ Ideal Use**

The ideal use of this function is for the manager to monitor the number of appointments any one employee has per day and increment pay and other incentives based on their daily contribution employees.

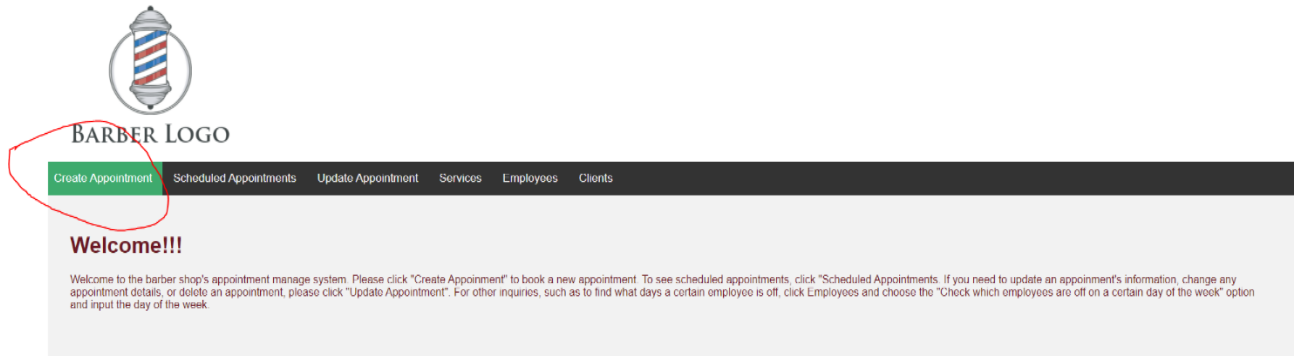
#### **➤ Ideal user**

Administrative Staff or secretary

### **❖ Steps to effectively utilize feature**

1. Generate lists of all client and employee information. To generate a list of all client or employee information, the administrative staff must connect to

<http://3.22.168.31/COSC457/barber/>



2. Click “Create Appointment” using the mouse; this will navigate the client to a new page, pictured below.

**Create Appointment**

Please enter the date you wish to have your appointment on in the format of Year-Month-Day Hour:Minute:seconds format. Ex: 2021-04-30 18:25:28.607

Date

2021-12-25 12:45:00.000

Desired Employee

Vincent

Email

Santa@christmas.com

Appointment Service

Haircut

Appointment Service Type

Haircut

Payment Type

Cash

Comment

Ho Ho Ho, I need a hair cut!

When you are done entering your information, please click the green "Submit" button, then click "Next"

Next [Back to home](#)

Submit

3. Once the data has been inputted in the correct format, continue clicking “Submit” and then clicking “Next”, where the user will be prompted to enter more data. Once data has been inputted, click “Submit” and then “Next”.

### Create Appointment

Please enter the date you wish to have your appointment on in the format of Year-Month-Day Hour:Minute:seconds format. Ex: 2021-04-30 18:25:28.607

Phone Number

410-410-4110

First Name

Jim

Last Name

Smith

When you are done entering your information, please click the green "Submit" button, then click "Next"

Submit

[Next Back to home](#)

- Appointment Details page should appear with a view results tab; click the "view results" tab to review the details of the appointment.

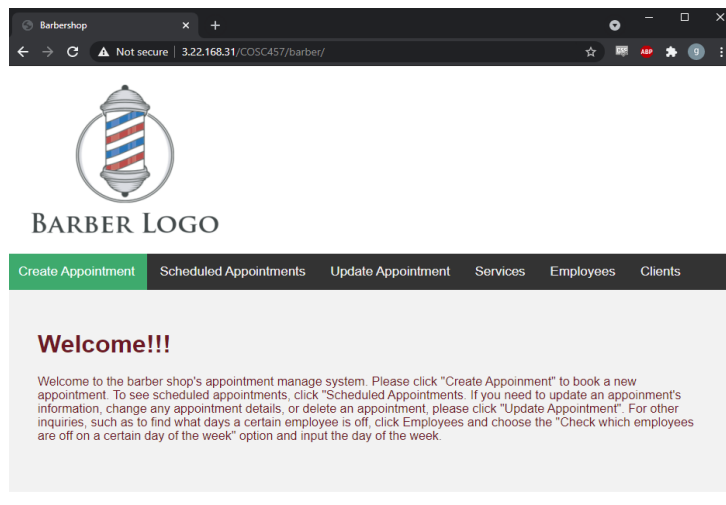
### Results

PhoneNumber	ClientID	FirstName	LastName	Date	AppointmentID	DesiredEmployee	Email	AppointmentService	AppointmentServiceType	PaymentType	Comments
410-410-4110	13	Jim	Smith	2021-12-25 12:45:00	15	Vincent	Santa@christmas.com	Haircut	Haircut	Cash	Ho Ho Ho, I need a hair cut

### Appointment Details

[Back to home](#)

View Results



The Admin will be welcomed with the home screen. From there, the admin must choose whether a list of client or client information is necessary.

For this example, Filter Employee per job title has been chosen, to select example Filter Employee per job title, please use the mouse to click to navigate to the employee page

2. Enter a job title such as "Barber", "Esthetician", or "Janitor".

3. Above is the report that is generated.

## Find Clients by Name

### ❖ Purpose

The purpose is to provide the ability to check the client information to inform them of any potential situation that might arise, like a family emergency where the barber is not able to complete the appointment, or to call before the appointment to confirm or reject their appointment.

### ❖ Ideal Use

The use of this function is to pull clients' names to allow the client to be notified of any appointment changes or cancellations. It is also used to view information about possible previous appointments if there was any.

#### ➤ Ideal user

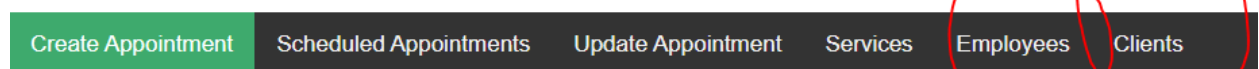
■ Management

### ❖ Steps to effectively utilize feature

1. For this example, Employee has been chosen. To select Employee, please use the mouse to click to navigate to the employee page



BARBER LOGO



2. For this example, Clients has been chosen. To select employee, please use the mouse to click to navigate to the Clients page



## BARBER LOGO

Create Appointment

Scheduled Appointments

Update Appointment

Services

Employees

Clients

- [Find Client by name](#)
- [Find Client by phone number](#)

3. Select the first bulletin to search clients by name.

Find Employee Data by entering their first name and last name

First Name

Gurmilan

Last Name

Sangha

[Back to home](#)

View Results

4. For this example Gurmilan Sangha has been entered, click “view results” to see all appointments.

## Results

PhoneNumber	ClientID	FirstName	LastName
512511555	11	Gurmilan	Sangha

## Find Clients by Phone Number

### ❖ Purpose

- ❖ The purpose is to provide the ability to check the client information to inform them of any potential situation that might arise, like a family emergency where the barber is not able to complete the appointment, or to call before the appointment to confirm or reject their appointment.

### ❖ Ideal Use

The use of this function is to pull clients phone numbers to allow the client to be notified of any appointment changes or cancellations.

#### ➤ Ideal user

- Management

### ❖ Steps to effectively utilize feature

1. Select the second bulletin in the list to search clients by phone number by using the mouse.



BARBER LOGO

Create Appointment   Scheduled Appointments   Update Appointment   Services   Employees   Clients

- [Find Client by name](#)
- [Find Client by phone number](#)

2. When this screen is visible, enter a phone number and then select the “view results” button.

#### Find A Client By Entering Their Phone Number

Phone Number

4109314027

[Back to home](#)

View Results

3. Select the “view results” button using the mouse to view the results.

## Results

PhoneNumber	ClientID	FirstName	LastName
4109314027	12	Ben	Lee

## Find Employee Information by Entering First and Last Name

### ❖ Purpose

- This function allows the manager to access their employees' contact information which allows effective communication in case of schedule changes, emergencies, or any other needs.

### ❖ Ideal Use

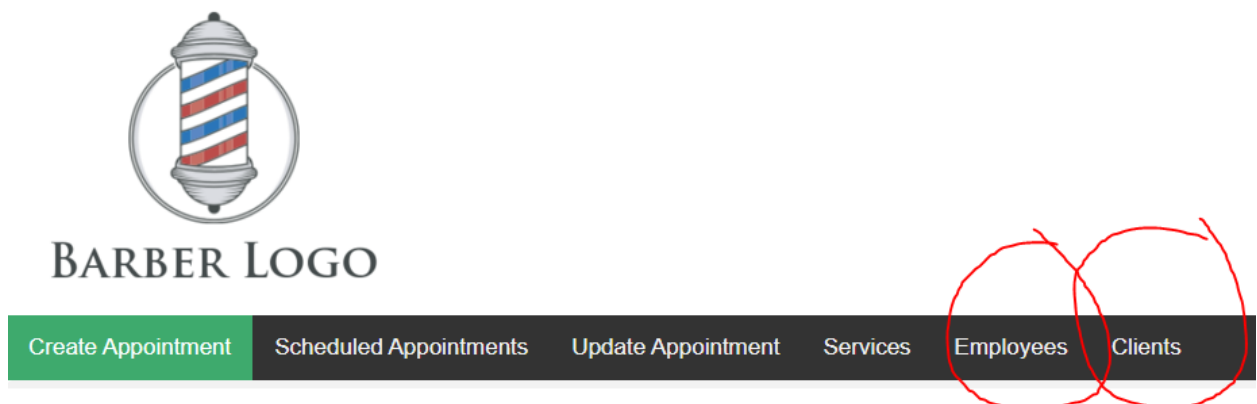
- The use of this function is to display employee information to allow users to know what services are available by specific employees and their contact information.

- **Ideal user**

- Management

### ❖ Steps to effectively utilize feature

1. For this example, Employee has been chosen. To select employee, please use the mouse to click to navigate to the employee page.





2. For this example, “find employee information” has been chosen. To select example Filter Employee per job title, please use the mouse to click to navigate to the employee page.



## BARBER LOGO

Create Appointment Scheduled Appointments Update Appointment Services Employees Clients

- [Find Employee Information by Entering First and Last name](#)
- [Filter employee per job title](#)
- [Check which employees are off on a certain day of the week](#)

3. To select employee information using first and last name, please use the mouse to click to navigate to the first bulletin.

**Find Employee Data by entering their first name and last name**

First Name

Last Name

[Back to home](#)

View Results

4. Enter the first and last name of the employee. For example, for Vincent Harris, enter the first name “Vincent” into the box below the first name and enter the last name “Harris” into the box below last name. Then click “View Results”.

## Results

Position	DaysOff	EmployeeID	FirstName	LastName
Barber	Monday	5	Vincent	Harris

# Update Appointment

## ❖ Purpose

- The ability to update the appointment information allows the user to modify the appointment time or any other variable so the clients' needs are best fulfilled.

## ❖ Ideal Use

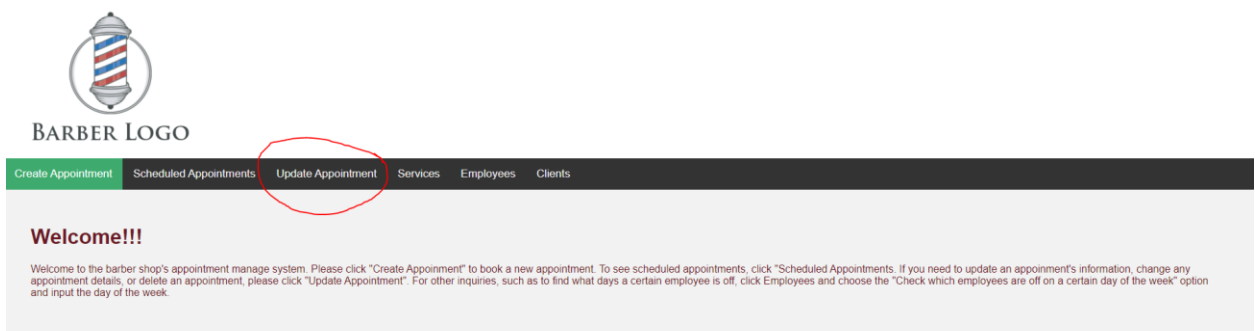
- The use of this function is to allow the appointment variables to be modified, from haircut to hair dye, or any other variation to ideally replicate the process of changing an appointment for services at a barbershop.

## Ideal user

- Admin staff only

## ❖ Steps to effectively utilize feature

1. If the user has another engagement at the same time as an already scheduled appointment the user can update the appointment to fit their new schedule



- All appointments for all users will be visible. Select the appointment that needs to be modified.

#### Update Appointment

Date	AppointmentID	DesiredEmployee	Email	AppointmentService	AppointmentServiceType	PaymentType	Comments	
2021-05-09 10:30:00	1	Hilda	rjtowson@gmail.com	Haircut	Mullet	Cash	Light fade on sides	<a href="#">Edit</a>
2021-05-02 11:15:00	2	Hollie	brandontowson@gmail.com	Haircut	Fade	Credit	Skin fade	<a href="#">Edit</a>
2021-05-03 12:30:00	3	Isaac	gurmilantowson@gmail.com	Haircut	Buzzcut	Cash	1 all over	<a href="#">Edit</a>
2021-05-04 14:45:00	4	Kira	rjtowson@gmail.com	Nails	Hands	Credit	Gel on top	<a href="#">Edit</a>
2021-05-05 16:00:00	5	Dulce	brandontowson@gmail.com	Nails	Toes	Cash	No paint	<a href="#">Edit</a>
2021-05-06 17:15:00	6	Odell	gurmilantowson@gmail.com	Nails	Hands	Credit	Hang nail on left big thumb	<a href="#">Edit</a>
2021-05-07 18:00:00	7	Magdalena	rjtowson@gmail.com	Wax	Upper Lip	Cash	Sensitive skin	<a href="#">Edit</a>
2021-05-08 09:15:00	8	Vincent	brandontowson@gmail.com	Wax	Eyebrows	Credit	Clean up eyebrow on sides	<a href="#">Edit</a>
2021-05-09 10:00:00	9	Kira	gurmilantowson@gmail.com	Wax	Legs	Cash	Swimmer	<a href="#">Edit</a>
2021-05-10 13:30:00	10	Hollie	rjtowson@gmail.com	Wax	Neck	Credit	Wants bald	<a href="#">Edit</a>
2021-06-20 16:45:00	11	Vincent	Benf@yahoo.com	Haircut	Haircut	Cash	I want a nice cut	<a href="#">Edit</a>
2021-06-20 16:45:00	12	Vincent	gfafafafafafafsgs@gmail.com	Nails	Nails	Bitcoin	test appt gs	<a href="#">Edit</a>
2021-06-20 16:45:00	13	Vincent	gadasdasd@outlook.com	Nails	Nails	Cash	I want nice nails	<a href="#">Edit</a>
2021-06-20 16:45:00	14	Dulce	Test@test.com	Haircut	Haircut	Cash	Please I need haircut	<a href="#">Edit</a>
2021-12-25 12:45:00	15	Vincent	Santa@christmas.com	Haircut	Haircut	Cash	Ho Ho Ho, I need a hair cut	<a href="#">Edit</a>

[Back to home](#)

- ❖ For this example, the first appointment will be modified and moved to July 4<sup>th</sup>, 2021 at 12 pm. To begin editing the appointment, select the underlined blue edit button on the right side of the tuples.
- ❖ Here the new date (July 4<sup>th</sup>, 2021 at 12pm) has been added and then the submit button must be selected.

#### Edit a user

Date

2021-07-04 12:00:00

AppointmentID

1

DesiredEmployee

Hilda

Email

rjtowson@gmail.com

AppointmentService

Haircut

AppointmentServiceType

Mullet

PaymentType

Cash

Comments

Light fade on sides

[Back to home](#)

Submit

- ❖ Below we can see the appointment time was updated, this same method can be repeated if any other variable of the appointment needs to be modified.

#### Update Appointment

Date	AppointmentID	DesiredEmployee	Email	AppointmentService	AppointmentServiceType	PaymentType	Comments	
2021-07-04 12:00:00	1	Hilda	rjtowson@gmail.com	Haircut	Mullet	Cash	Light fade on sides	<a href="#">Edit</a>

## **View All Appointments**

### ❖ Purpose

- This will allow management to oversee all future appointments in order to find any gaps in their schedules which they may need to know or to use this data for managerial purposes.

### ❖ Ideal Use

- The use of this function is to view all upcoming appointments in the system to thoroughly plan for the effective course of action for the day. For example, with the different times we are dealing with now in the pandemic, a barbershop is dealing with people's personal space under 6ft distances. This feature can allow management to plan for all services for the day to make sure nothing is being reused and all tools needed are fresh and clean.

- Ideal user

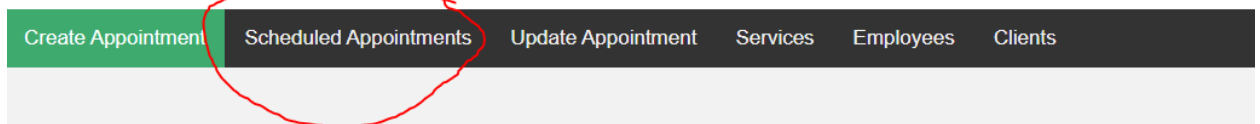
- Management

### ❖ Steps to effectively utilize feature

1. To view all scheduled appointments, select the “Scheduled appointments” button using the mouse.



## BARBER LOGO



2. Enter data using the required format listed in the directions.

### List All Appointments

Please enter the date in the following format: %2021-05-10%. The % are required since we are using the substring function

Date

  
[Back to home](#) [View Results](#)

3. Click “view results” once the date has been entered in the required format. Once, the user clicks “view results”, the results will be generated

### Results

Date	AppointmentID	DesiredEmployee	Email	AppointmentService	AppointmentServiceType	PaymentType	Comments
2021-06-20 16:45:00	11	Vincent	Benf@yahoo.com	Haircut	Haircut	Cash	I want a nice cut
2021-06-20 16:45:00	12	Vincent	gfafafafaffafafsgs@gmail.com	Nails	Nails	Bitcoin	test appt gs
2021-06-20 16:45:00	13	Vincent	gadasdadsd@outlook.com	Nails	Nails	Cash	I want nice nails
2021-06-20 16:45:00	14	Dulce	Test@test.com	Haircut	Haircut	Cash	Please I need haircut

## View Services Offered at Barbershop

### ❖ Purpose

The ability to check the different services offered along with the price is a huge benefit to all customers so if they wanted to see all the services offered to select specific services, they are available to do so. Also, they are able to compare prices to competitors if they choose to do so.

### ❖ Ideal Use

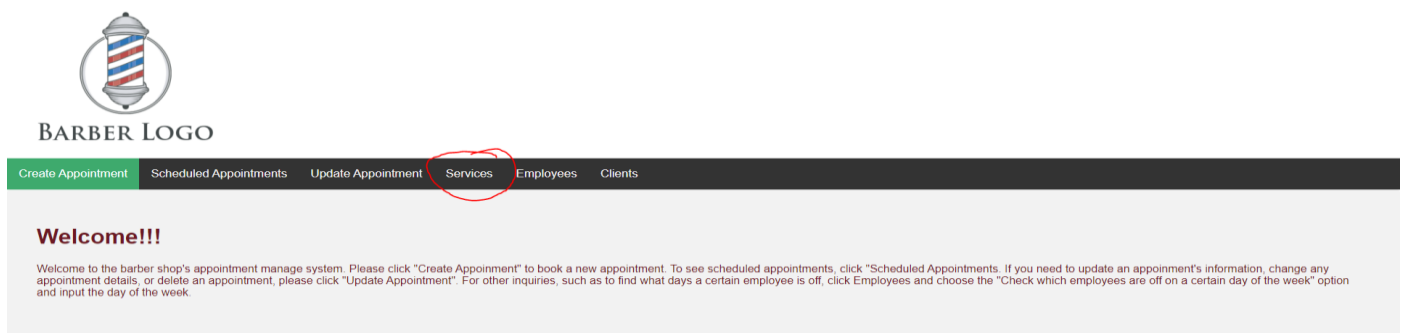
The use of this function is to just display the cost of services and the services offered for current and future clients.

#### ➤ Ideal user

- All users.

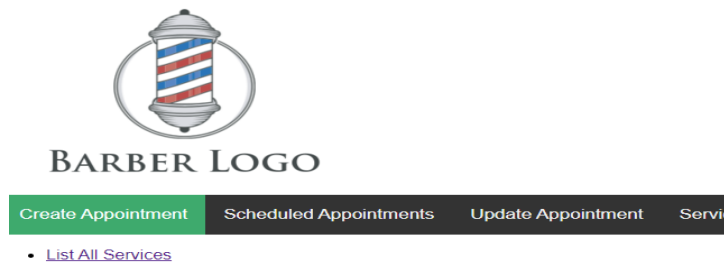
### ❖ Steps to effectively utilize feature

1. To view all the available services, select the services button



2. Use the mouse to select the “Services” button, once selected the user will be navigated to a new page.

3. The user will need to select the one and only bulletin view all services



4. Once the user has selected the first bulletin, select the “view results” button on the right hand side of the screen. The following list will be generated with prices.

## Results

ServiceName	ServiceID	ServiceType	Cost
Haircut	1	Mullet	60
Wax	2	Eyebrows	40
Haircut	3	Fade	50
Haircut	4	Buzzcut	45
Wax	5	Upper Lip	65
Wax	6	Legs	55
Nails	7	Toes	85
Nails	8	Hands	75
Haircut	9	Dye	100
Wax	10	Neck	50