

SOFTWARE ENGINEERING PROCESSES AND TOOLS

PART A - USER DOCUMENTATION

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1. Installation and Setup Guide of XAMPP and Database

1.0 Prerequisite

Operating system: Microsoft Windows

1.1 Downloading the XAMPP server stack

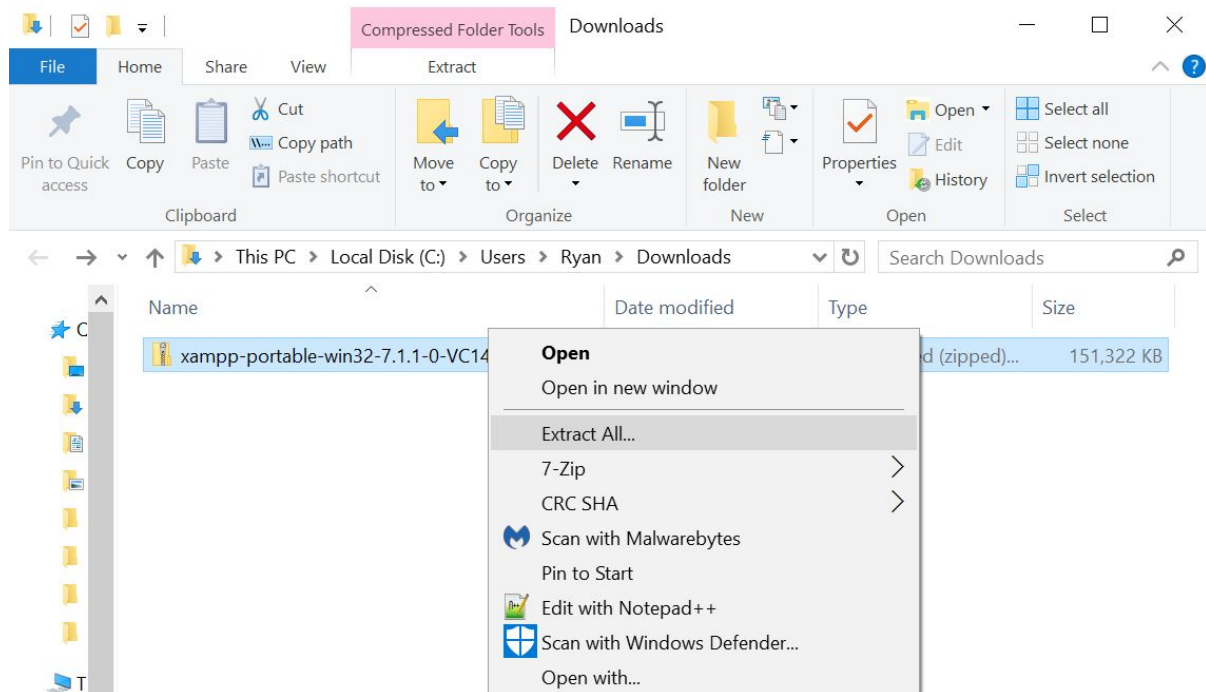
This package is the **XAMPP for Windows 7.1.1**, which includes (**Apache 2.4.25**, **MariaDB 10.1.21(MySQL)**, **PHP 7.1.1**), the services we need.

Download XAMPP portable(Non-installation required) package from the link below:

<https://sourceforge.net/projects/xampp/files/XAMPP%20Windows/7.1.1/xampp-portable-win32-7.1.1-0-VC14.zip/download>

1.2 Installing the XAMPP server stack

Extract the downloaded compressed file into the root directory of your partition.



← Extract Compressed (Zipped) Folders

Select a Destination and Extract Files

Files will be extracted to this folder:

C:\

Browse...

☒ Show extracted files when complete

Extract

Cancel

1.3 Starting the XAMPP server stack

Once extracted, go to the extracted package, directory ("C:\xampp", if it was extracted in root directory of partition), and run the program "xampp-control.exe", Select the English option and save.

- Start **Apache** and **MySQL** services.

XAMPP Control Panel v3.2.2 [Compiled: Nov 12th 2015]

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	3528 2428	80, 443	Stop Admin Config Logs
<input type="checkbox"/>	MySQL	200	3306	Stop Admin Config Logs
<input type="checkbox"/>	FileZilla			Start Admin Config Logs
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

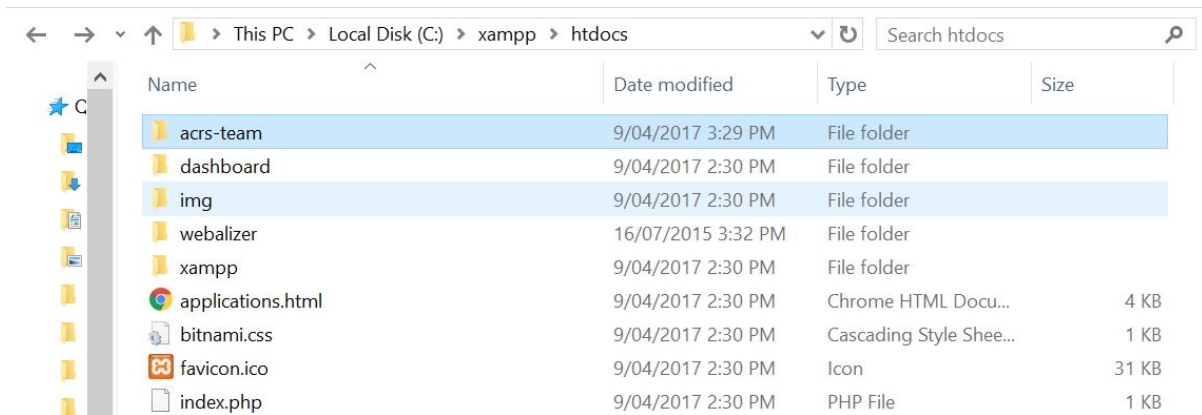
3:05:08 PM [main] All prerequisites found
3:05:08 PM [main] Initializing Modules
3:05:08 PM [main] The FileZilla module is disabled
3:05:08 PM [main] The Mercury module is disabled
3:05:08 PM [main] Starting Check-Timer
3:05:08 PM [main] Control Panel Ready
3:05:13 PM [Apache] Attempting to start Apache app...
3:05:13 PM [Apache] Status change detected: running
3:05:45 PM [mysql] Attempting to start MySQL app...
3:05:47 PM [mysql] Status change detected: running

1.4 Setting up the web server directory

Back to the XAMPP folder, locate the **htdocs** folder, this is where we will be putting the assignment repository.

- Extract or move the entire assignment folder into the **htdocs** folder.

In this demonstration case, the assignment folder is called **acrs-team**.



Name	Date modified	Type	Size
acrs-team	9/04/2017 3:29 PM	File folder	
dashboard	9/04/2017 2:30 PM	File folder	
img	9/04/2017 2:30 PM	File folder	
webalizer	16/07/2015 3:32 PM	File folder	
xampp	9/04/2017 2:30 PM	File folder	
applications.html	9/04/2017 2:30 PM	Chrome HTML Docu...	4 KB
bitnami.css	9/04/2017 2:30 PM	Cascading Style Shee...	1 KB
favicon.ico	9/04/2017 2:30 PM	Icon	31 KB
index.php	9/04/2017 2:30 PM	PHP File	1 KB

1.5 Setting up the database

1. Open a Command prompt, and change directory to "**c:\xampp\mysql\bin**", if xampp was extracted into the root directory, this can be done using the command
 - "**cd c:\xampp\mysql\bin**", without the quotes.

```
C:\Users\Ryan>cd c:\xampp\mysql\bin\
```

2. Run mysql.exe with the root username, using
 - "**mysql.exe -u root**" without quotes.

The command prompt will return the below message, if successfully logged into the database.

```
c:\xampp\mysql\bin>mysql.exe -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 10.1.21-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2016, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

3. Locate the sql script called "**createTablesAndInsertDummyRecords.sql**", used to setup the database, tables and insert dummy records into the tables, located in the assignment folder under the "sqlScripts" folder.

("C:\xampp\htdocs\acrs-team\sqlScripts", if it was extracted in root directory of partition)

4. Run the **source** command, used to execute, sql scripts in MySQL, with the absolute file path of the sql script "**createTablesAndInsertDummyRecords.sql**". In our demonstration case, it would be

- **"source**

C:\xampp\htdocs\acrs-team\sqlScripts\createTablesAndInsertDummyRecords.sql", without the quotes.

If successful the script will process, create the database, tables, and insert dummy records.

```
MariaDB [(none)]> source C:\xampp\htdocs\acrs-team\sqlScripts\createTablesAndInsertDummyRecords.sql
Query OK, 6 rows affected (0.09 sec)

Query OK, 1 row affected (0.00 sec)

Database changed
Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.06 sec)

Query OK, 0 rows affected (0.04 sec)

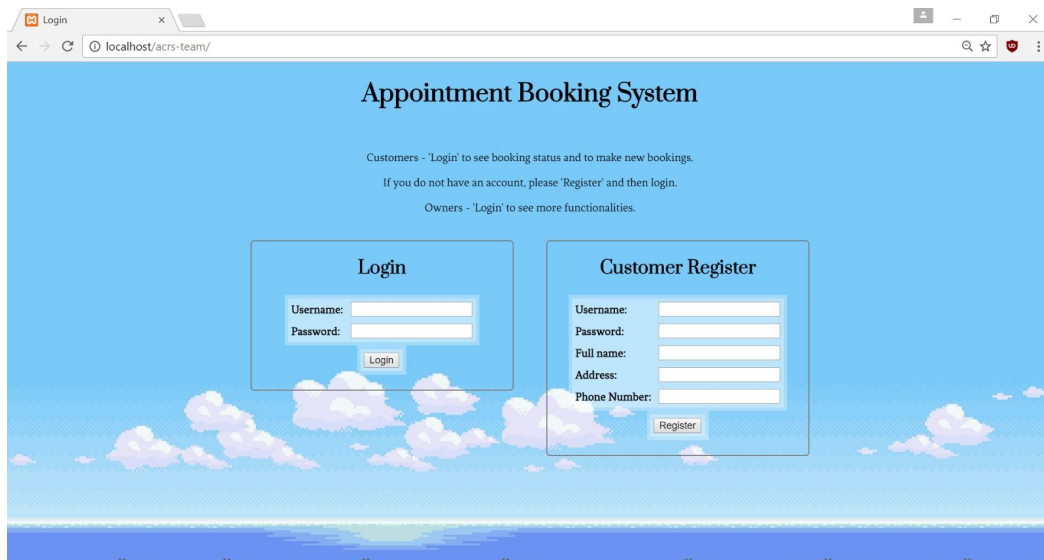
Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)
```

1.6 How to access Booking Website web page

1. Open a browser of choice, In our case it is Google Chrome.
2. In the URL go to - http://localhost/<What_you_named_the_assignment_folder>
 - If XAMPP was extracted into the root directory and the assignment folder was placed in “c:\xampp\htdocs”, enter into the URL:
 - <http://localhost/acrs-team/>
3. The webpage will be redirected to a page similar to below.



4. You can test whether the database has successfully been set up by login into the owner account using (Username: admin / Password: admin), and you'll be redirected to the Business owners, administration page.



2. Page Descriptions and Functions

2.1 Main Page: index.php

This page is the first page that should be accessed, it contains the customer and business owner login section, as well as the customer register form.

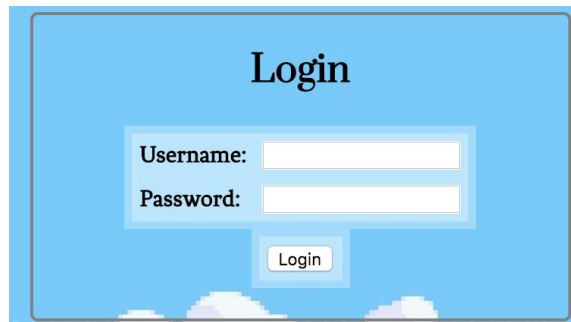
A screenshot of a web form titled "Login" in a large, bold, black serif font. The form is set against a light blue background with a faint cloud pattern at the bottom. It contains two input fields: "Username:" and "Password:", both with white text and light blue borders. Below these fields is a small, light blue button with the word "Login" in black text.

Figure 1 - Login Form

The login form works for all entries inside the database (including those that have been added through the customer registration form); however the default details that should be used for testing purposes are:

Customer:	username:	customer
	password:	customer

Business Owner:	username:	admin
	password:	admin

Once the user has entered in the username and password they desire, they can either press the "enter" key or click the "login" button to begin processing the login request.

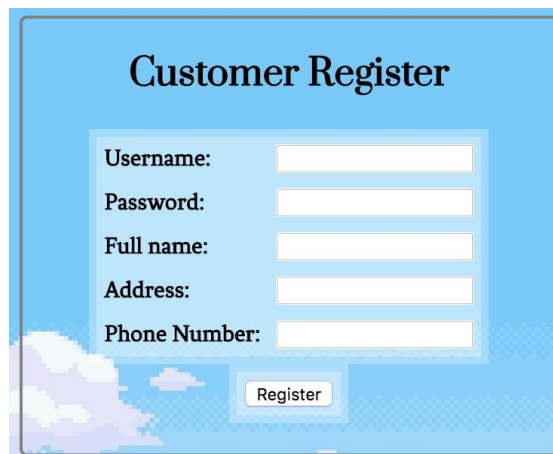
A screenshot of a web form titled "Customer Register" in a large, bold, black serif font. The form is set against a light blue background with a faint cloud pattern at the bottom. It contains five input fields: "Username:", "Password:", "Full name:", "Address:", and "Phone Number:", all with white text and light blue borders. Below these fields is a small, light blue button with the word "Register" in black text.

Figure 2 - Customer Register Form

For the customer register form accept a new registration all five fields must have entries, and the username must be a unique value. There are currently no other validation checks (eg: valid phone number and email formats). Once the user is happy with their input they must click the "register" button for the form to start processing their input.

2.2 Initial Customer Page: customerPage.php

This is the first page that a customer will see after they log in. The central focus of the page is the bookings that have been made by the account that is currently logged in. There is no interaction with this part of the page, however.



Start Date/Time	End Date/Time	Extra Notes
1:30PM 28-April-2017	2:30PM 28-April-2017	Clip
1:30PM 21-April-2017	2:30PM 21-April-2017	Clip
1:30PM 14-April-2017	2:30PM 14-April-2017	Clip
4:30PM 9-April-2017	5:00PM 9-April-2017	Clip
1:30PM 8-April-2017	2:15PM 8-April-2017	Clip & Style
10:30AM 7-April-2017	11:15AM 7-April-2017	Clip & Style
10:00AM 6-April-2017	10:45AM 6-April-2017	Wash & Dry
3:30PM 5-April-2017	4:15PM 5-April-2017	Wash & Dry
10:30AM 4-April-2017	11:45AM 4-April-2017	Clip & Style
3:30PM 2-April-2017	4:30PM 2-April-2017	Clip, Wash & Dry
10:00AM 1-April-2017	11:00AM 1-April-2017	Clip, Wash & Dry
2:15PM 31-March-2017	3:00PM 31-March-2017	Wash & Dry
3:00PM 30-March-2017	3:45PM 30-March-2017	Clip & Style
10:00AM 29-March-2017	10:45AM 29-March-2017	Wash & Dry
4:45PM 28-March-2017	5:30PM 28-March-2017	Wash & Dry
1:00PM 26-March-2017	1:45PM 26-March-2017	Clip, Wash & Dry
11:30AM 25-March-2017	1:30PM 25-March-2017	Clip, Wash & Dry
9:00AM 24-March-2017	10:15AM 24-March-2017	Clip, Wash & Dry
12:30PM 23-March-2017	2:30PM 23-March-2017	Clip & Wash
3:45PM 22-March-2017	5:00PM 22-March-2017	Clip, Wash, Dry & Style
12:30PM 20-March-2017	1:30PM 20-March-2017	Clip, Wash & Dry

Figure 3 - “customer’s” bookings summary

Along the header of the page there are three buttons: “Show Booking Summaries”, “Make a new Booking”, and “Sign Out”. (Please note, “Hello, customer” is not a button, it just uses the same style as the rest of the navigation bar).

Booking Website

Hello, customer. Show Booking Summaries Make a new Booking Sign Out

Figure 4 - Main header of the customer section of the website

The “Show Booking Summaries” button leads the user to **2.2** “customerPage.php”, “Make a new Booking” takes the user to **2.3** “customerBooking.php”, and “Sign Out” logs the user out of the current session, and takes them back to **2.1** “index.php”. This header is consistent throughout the entire customer section of the website and will not be re-explained for all pages.

2.3 Customer view/make a Booking: customerBooking.php

This is one of the most important pages on the website, it allows the customer to actually make a booking into the system.

The screenshot shows the 'Make a booking' page. At the top, there's a navigation bar with 'today' and a right arrow, the month 'April 2017', and 'month' and 'day' view toggles. Below this is a calendar grid for April 2017. The calendar shows days from 26 to 6. The 8th of April is highlighted in yellow. To the right of the calendar is a form titled 'Make a booking'. The form includes a list of instructions: 1. Select a date in the calendar and view available slots. 2. Enter in booking time below. 3. Enter in extra requests. 4. Book appointment. The form fields are: 'Date:' (a text input field), 'Start Time:' (a time selection dropdown), 'End Time:' (a time selection dropdown), and 'Extra notes:' (a text area with a placeholder 'Enter any other special requests...'). At the bottom of the form is a 'Book Appointment' button.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Make a booking

1. Select a date in the calendar and view available slots.
2. Enter in booking time below.
3. Enter in extra requests.
4. Book appointment.

Date:

Start Time:

End Time:

Extra notes:

Book Appointment

Figure 5 - “Making a Booking” page’s main content

The main content of this page consists of a calendar, that has four buttons on the top (two in the top left corner which are used for view navigation, and two in the top right corner which change the calendar’s view from a monthly overview to a daily overview). The way this page works is somewhat convoluted. Off to the right of the calendar there is a form with four fields that need to be filled in. The “Date” field will be filled in automatically whenever the user clicks on a day on the main calendar, at the same time as this the view of the calendar will shift from a month view to a timeline of the day they have clicked on. This will show all of the appointments that have been made on that day, as well as the times that are free(White).

today > **April 14, 2017** month day

Friday

9am

10am

11am 10:45 - 11:45
Booking filled

12pm

1pm

2pm 1:30 - 2:30
Booking filled

3pm

4pm

5pm

Make a booking

1. Select a date in the calendar and view available slots.
2. Enter in booking time below.
3. Enter in extra requests.
4. Book appointment.

Date:
14/04/2017

Start Time:
--:-- --

End Time:
--:-- --

Extra notes:
Enter any other special requests...

Book Appointment

Figure 6 - Daily Timeline view of the calendar, showing the date has been entered

Entering in the start time and end time are much simpler to do than the date; however, it is much more tedious as the user will have to enter in the time specifically. The last field is simply a text box for any “extra notes” that may need to be submitted with the booking.

Date:
14/04/2017

Start Time:
09:00 AM

End Time:
10:00 AM

Extra notes:
None

Book Appointment

Figure 7 - Showing the Start time, end time, and extra notes sections being filled in.

Once the user has finished entering in the details of their desired appointment they can click on the “Book appointment” button to actually book it in (assuming it is a valid appointment).

2.4 Initial Business Owner Page: businessPage.php

This page is very similar to the initial customer page 2.1 however rather than just showing the bookings for just the currently logged in user, it shows all of the bookings currently in the system for their business (sorted by time, earliest to latest). There is no interaction except for navigation on this page.

Booking Summaries			
Customer Name	Start Date/Time	End Date/Time	Extra Notes
Bernard Campbell	9:30AM 20-March-2017	10:00AM 20-March-2017	Clip
Alica Michaels	12:30PM 20-March-2017	1:30PM 20-March-2017	Clip, Wash & Dry
Gary Peterson	4:45PM 20-March-2017	5:30PM 20-March-2017	Wash & Dry
Horton Andersen	10:30AM 21-March-2017	11:45AM 21-March-2017	Clip & Style
Isabelle Barkley	1:00PM 21-March-2017	1:45PM 21-March-2017	Wash & Dry
Chris Hunter	2:15PM 21-March-2017	4:00PM 21-March-2017	Clip, Wash & Dry
Isabelle Barkley	11:30AM 22-March-2017	2:15PM 22-March-2017	Wash & Dry
Horton Andersen	3:00PM 22-March-2017	3:45PM 22-March-2017	Clip & Style
Chris Hunter	3:30PM 22-March-2017	4:15PM 22-March-2017	Wash & Dry
Alica Michaels	3:45PM 22-March-2017	5:00PM 22-March-2017	Clip, Wash, Dry & Style
Isabelle Barkley	10:00AM 23-March-2017	10:45AM 23-March-2017	Wash & Dry
Chris Hunter	11:00AM 23-March-2017	12:30PM 23-March-2017	Clip & Wash
Alica Michaels	12:30PM 23-March-2017	2:30PM 23-March-2017	Clip & Wash
Horton Andersen	2:30PM 23-March-2017	3:15PM 23-March-2017	Clip & Style
Gary Peterson	4:15PM 23-March-2017	4:45PM 23-March-2017	Wash & Dry
Alica Michaels	9:00AM 24-March-2017	10:15AM 24-March-2017	Clip, Wash & Dry
Bernard Campbell	10:30AM 24-March-2017	11:15AM 24-March-2017	Clip & Style
Horton Andersen	11:30AM 24-March-2017	12:45PM 24-March-2017	Clip, Wash, Dry & Style
Gary Peterson	1:45PM 24-March-2017	2:15PM 24-March-2017	Clip
Bernard Campbell	2:15PM 24-March-2017	3:00PM 24-March-2017	Wash & Dry
Bernard Campbell	9:00AM 25-March-2017	9:45AM 25-March-2017	Wash & Dry
Gary Peterson	10:00AM 25-March-2017	10:30AM 25-March-2017	Clip
Alica Michaels	11:30AM 25-March-2017	1:30PM 25-March-2017	Clip, Wash & Dry
Isabelle Barkley	1:30PM 25-March-2017	2:15PM 25-March-2017	Clip & Style

Figure 8 - Booking Summaries for business Owner

The main header for the Business Owner section of the website is very similar in appearance to the customer's version but with a few major functionality changes. To begin with, the centre two buttons are now drop down menus with more options.



Figure 9 - Business Owner Section Header

The "Bookings" drop down menu holds only two items: "Booking Summaries" which leads to the initial "businessPage.php" **2.4**. Whereas the "New Bookings" option yields a new result, leading the user to "businessPageNewBookings.php" **2.5**.

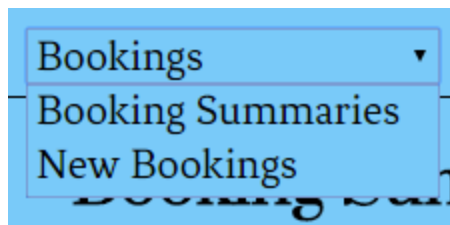


Figure 10 - "Bookings" Drop down menu options

The "Employees" drop down menu holds three completely new options: "Availability" which takes the user to "businessPageEmployeeAvailability.php" **2.6**, "Add Shift" redirects the user to "businessPageEmployeeAddShift.php" **2.7**, and lastly "Add New Employee" leads to "businessPageEmployeeAddEmployee.php" **2.8**.

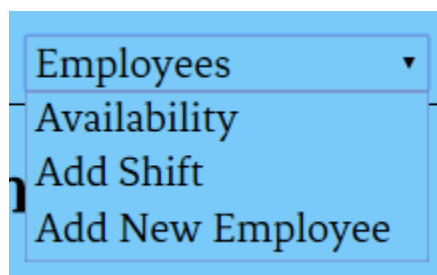


Figure 11 - "Employees" Drop down menu options

2.5 New Bookings Page: [businessPageNewBookings.php](#)

This page is remarkably simple, again having no interaction beyond navigation; however, it serves an important purpose: showing all bookings that have been currently made for the next seven days, showing the earliest first.

All bookings for the next 7 days			
Customer Name	Start Date/Time	End Date/Time	Extra Notes
Chris Hunter	9:00AM 9-April-2017	9:45AM 9-April-2017	Wash & Dry
Gary Peterson	10:00AM 9-April-2017	11:00AM 9-April-2017	Clip, Wash & Dry
Horton Andersen	11:30AM 9-April-2017	12:15PM 9-April-2017	Clip & Style
Bernard Campbell	1:00PM 9-April-2017	1:45PM 9-April-2017	Clip, Wash & Dry
Isabelle Barkley	2:45PM 9-April-2017	3:30PM 9-April-2017	Wash & Dry
Alica Michaels	4:30PM 9-April-2017	5:00PM 9-April-2017	Clip
Chris Hunter	9:00AM 10-April-2017	10:00AM 10-April-2017	Wash & Dry
Gary Peterson	11:00AM 10-April-2017	12:00PM 10-April-2017	Clip, Wash & Dry
Horton Andersen	11:30AM 11-April-2017	12:30PM 11-April-2017	Clip & Style
Bernard Campbell	1:00PM 12-April-2017	2:00PM 12-April-2017	Clip, Wash & Dry
Isabelle Barkley	10:45AM 14-April-2017	11:45AM 14-April-2017	Wash & Dry
Alica Michaels	1:30PM 14-April-2017	2:30PM 14-April-2017	Clip

Figure 12 - All Bookings for the Next Seven Days

2.6 Availability: [businessPageEmployeeAvailability.php](#)

This page is another rather complex page with a lot of interactivity. The calendar itself has six buttons:

The top left three are again for date navigation. If you are in month view; the left arrow shifts the view one month backward, and the right arrow shifts the view one month forward; if you are in week view, they each shift the view one week in the same direction; and the same goes for the day view. The middle button “today” just shifts the view to the current date.

The top right three change the view mode to the selected one, either month, week, or day.



Figure 13 - Employee Availability Month View

If a day is clicked in either month view, or week view, then the view is changed to focus only on the selected day, and the actual employee working times are shown. In week view, the working times for each employee are also shown.

In the future it may be wise to have some sort of menu where the user can select which employees they want to the shifts for, as currently it just shows all of them. If there were more than three or four employees rostered on at the same time it may become too cluttered to be useful, and most businesses have more than four employees working at the same time.

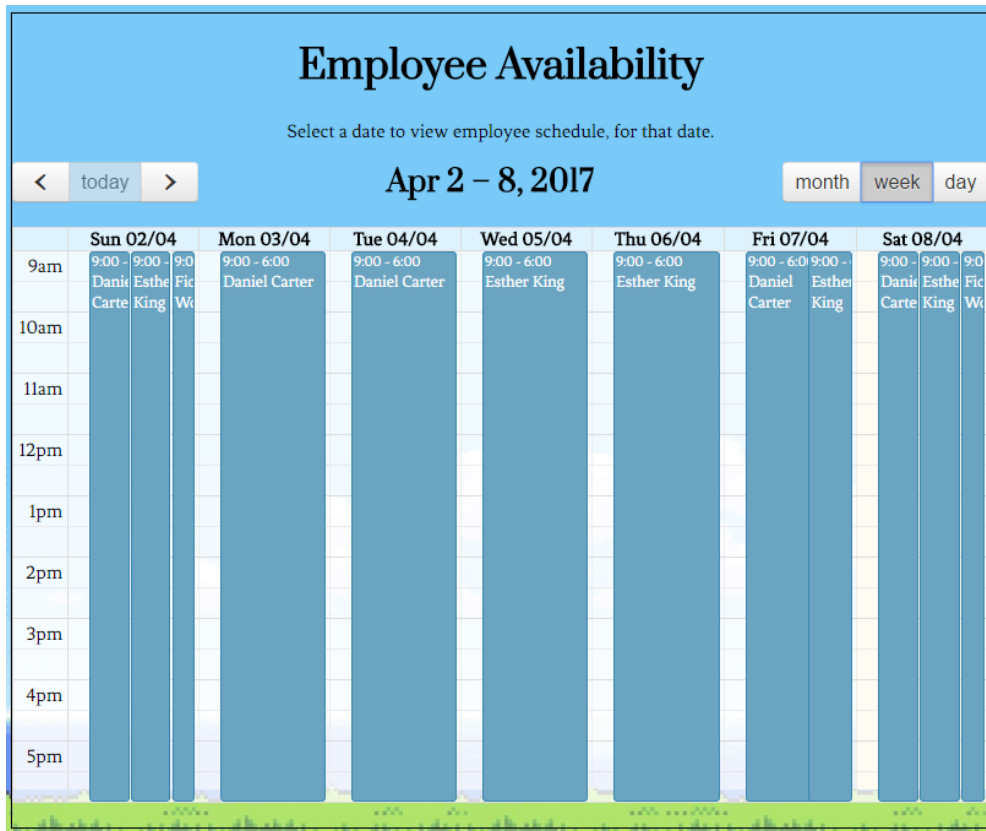


Figure 14 - Weekly view of Employee Availability



Figure 15 - Daily View of Employee Availability

2.7 Add Shift: [businessPageEmployeeAddShift.php](#)

This page and its main functionality of adding a shift for an employee works nearly identically to the “Make a Booking” [2.3](#), except you need to select the employee whose shift you are adding from a drop down menu on the right hand side form.

ie: Clicking on a day in the calendar will automatically add it in the form, but the rest must be inputted manually.

This page also takes in functionality from [2.6](#) in that all of the current shifts (for all employees) can also be seen in both the weekly view and daily view. These are identical to figure 14 and figure 15 so they are not included here as well.




Figure 16 - Adding a new shift for an employee main content

2.8 Add Worker: [businessPageEmployeeAddEmployee.php](#)

This final page is very simple, just a three text field form that is used to add a new employee to the database. All three fields must have data and the employee number must also be unique before the adding process will succeed. Success will render a message saying it is successful; however it may be useful to see the actual list of employees in [2.7 Add Shift](#).



Figure 17 - Adding a new Employee to the database Form