

SEATWRLD: USER MANUAL

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TEAM 3

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About the project

This application is an extension of the WRLD3D mapping platform that developed an integrated data visualisation technique for time-series data and its variation over time. This was to give WRLD customers a better conceptualisation of what visualisation techniques are available for WRLD3D and how they might be integrated for their specific context. The tool produced allowed customers to gauge the current busyness/occupancy of a sit-in restaurant over the course of multiple work days, through both 2 and 3 dimensional visualisations.

Setting up the project

1. Download or pull from GitHub

To set up this application you first must download and extract the folders and files from this directory:

<https://github.com/RaduBB1995/Team3WRLDProject.git>

Once you have downloaded and extracted the files inside it. Open a command prompt and navigate to the file directory using the cd command, it will typically be something like this:

```
Cd users/[yourProfileName]/documents/ Team3Project-master
```

2. Installing node.js

To be able to run our application you must have node.js installed.

To install node.js follow the link below to download the right version for your current platform and then follow the installation instructions for your given platform.

<https://nodejs.org/en/download/>

3. Initiate the application directory

The next step is to prep the directory to be able to run with node.js. We do this by running following command in the project directory:

```
$ npm init -y
```

4. Install Parcel

Next, we will install parcel bundler which will allow us to set up the application and run it locally on your machine. To do this you have to run the following command:

```
npm install -g parcel-bundler
```

5. Install JSON-Server

Next step is to install the JSON-server.

1. First you must open another command prompt and navigate to the application directory (for now we will refer to this as cmd2)
2. Once you are in the application directory in cmd2, execute the following command:

```
Npm install wrld.js axios
```

3. Next execute the following command:

```
Npm install babel-core babel-plugin-transform-runtime babel-runtime -dev
```

4. Next use the touch command to create ".babelrc" and then enter the code below:

```
{
  "plugins": [
    [
      "transform-runtime",
      {
        "polyfill": false,
        "regenerator": true
      }
    ]
  ]
}
```

5. Next use the following command to install the local JSON-server host

```
Npm install -g json-server
```

5.5. If you are not the administrator on your machine you may have to run the following command to add these new dependencies to your path every time you run a new command prompt instance.

6. Build the Project

1. Now in cmd2 you want to run the following command:

```
json-server --watch model/db.json
```

2. Now in the original command prompt run the following command:

```
Parcel view/web/index.html
```

It will hopefully build in under a minute and it will give you a localhost address- usually 1234, now copy this link and enter it into a browser, we recommend chrome.

Congratulations, you should have successfully set up the application.

User Features

1. Exterior View Features:

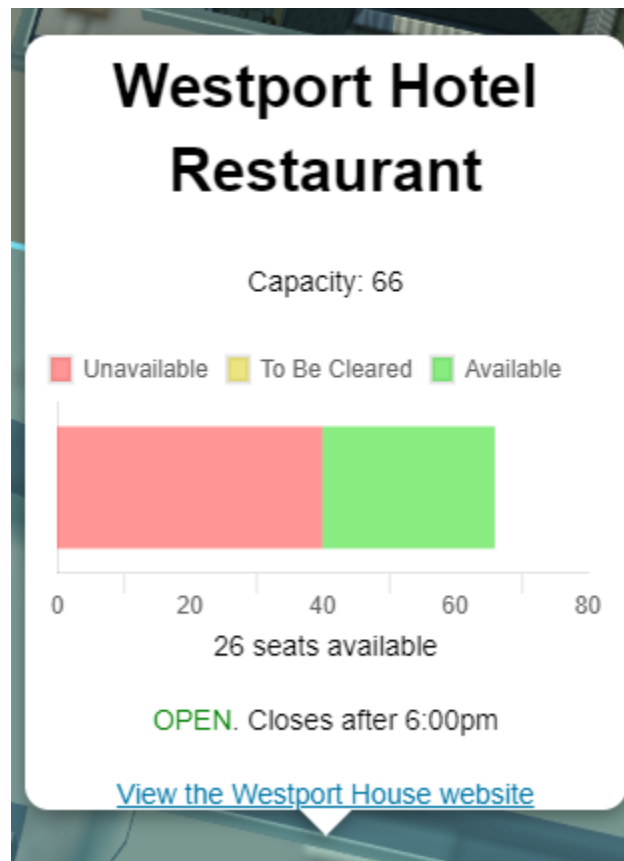
Figure 1.1: Exterior View Of Westport House



1.1: Accessing information about the restaurant from the exterior view

1. Once the application has been loaded up it should automatically show the Westport house building in Dundee. From here you can see that building is highlighted (see Figure 1.1).
2. From here maneuver the mouse so that it is inside the highlighted zone of the building and left click it.
3. After left clicking the highlighted zone a popup should appear that displays current information about the restaurant including:
 - The title of the restaurant
 - The overall capacity of the restaurant
 - A stacked horizontal bar graph that breaks down what seats are available, unavailable and to be cleared.
 - A value that shows how many seats are available at this current time.
 - Whether or not the restaurant is open or closed at this current time, and when it open/closes next.
 - A link to the Westport House website.

Figure 1.2: Exterior Popup



1.2: Moving into the interior of the building from the exterior

1. Inside the highlighted zone that is around the restaurant building there is a small icon that is circular and has a white border around it. Inside the icon there is a white open door with an arrow pointing towards it, against a blue background. (see figure 1.3)
2. Once you have located the icon, maneuver the mouse so that it is over the icon and left click.

Figure 1.3: Enter Icon



3. Once clicked the map should now enter the building and pan around the building towards the restaurant.

2. Interior View:

Once in the interior view, you will be able to see that each chair in the restaurant is highlighted with one of four colours which represents its occupancy:

- Red indicates that the chair highlighted is currently occupied by a customer.
- Green indicates that the chair highlighted is currently vacant and available for a new customer.
- Yellow indicates that the chair highlighted has recently been vacated but has not been cleared and reset for the next customer but will be available in the next 15 minutes.
- White indicates that the restaurant is closed, and the chair is currently unavailable.

Figure 2.1: Interior View 1



2.1: Seeing which seats are currently available, to be cleared, occupied, and unavailable:

1. To get a breakdown of the seating information it is displayed on the side of the screen in a popup once you have entered the interior.
2. Inside this popup there is a doughnut chart which will visualize all the chairs and split them up according to which ones are available, occupied, to be cleared and unavailable.
3. To figure out how many chairs are available hover the mouse over the green part of the doughnut chart and a popup should appear which shows a number value that represents how many chairs are currently available.
4. To figure how many chairs are occupied, use the mouse to hover over the red part of the doughnut chart and a popup should appear with a number value indicating how many seats are currently occupied.
5. To figure how many chairs are to be cleared, use the mouse to hover over the yellow part of the doughnut chart and a popup should appear with

a number value indicating how many seats are to be cleared and set up for the next customer.

6. When the restaurant is closed the doughnut chart will be grey to indicate that none of the seats are available.

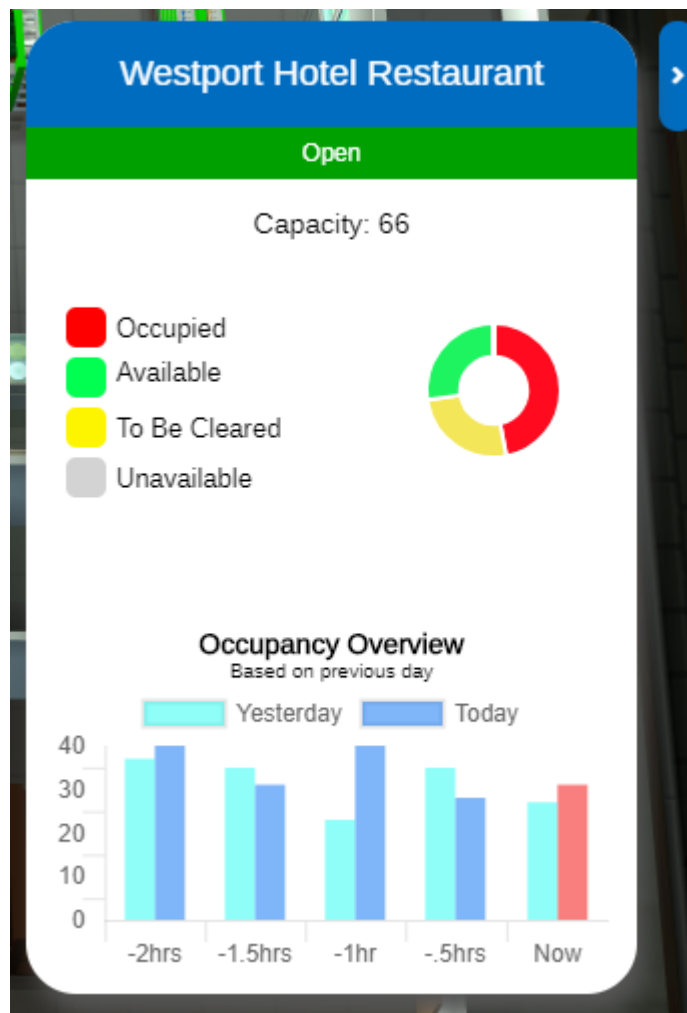
2.2: Comparing the current occupancy of the restaurant against the previous day.

1. to view the occupancy of the restaurant at the current time and the previous two hours against the previous day, look to the popup at the side of the screen and underneath the doughnut chart there is a double bar chart that displays:

- The total amount of chairs occupied at the current time.
- The total amount of chairs occupied half an hour ago and the day before that.
- The total amount of chairs occupied an hour ago and the day before that.
- The total amount of chairs occupied an hour and a half ago and the day before that.
- The total amount of chairs occupied two hours ago and for the day before that.

2. Using this bar graph you can hover over any bar and view the total number of chairs occupied against the day before.

Figure 2.2



2.3: Viewing specific occupancy information about each chair

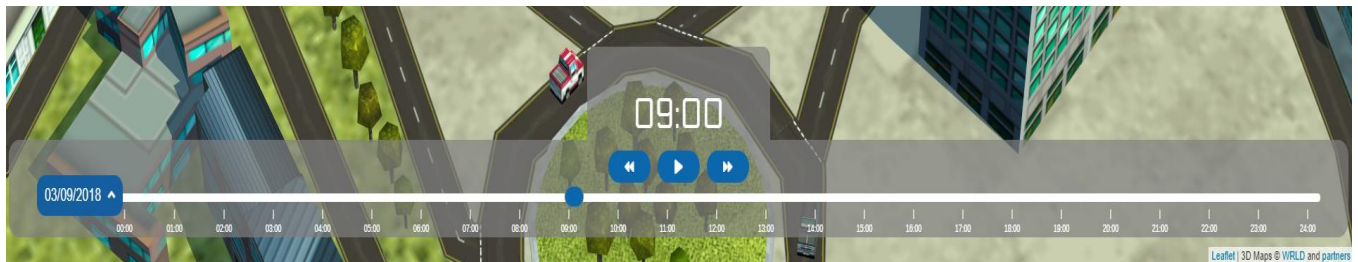
1. To view specific information about each chair, maneuver the mouse over the highlighted area around the desired chair that you wish to find out more about.
2. Once over the desired chair, left click the highlighted area.
3. Now a popup will appear above the chair that displays:
 - Whether or not the seat is available or not
 - When it was last occupied
 - How many occupants its had today
 - And a graph displaying how many occupants the chair has had so far against the same time the previous two days.



Figure 2 4/5/6: Different versions of each chair state popup.

3. Using the time slider

Figure 3.1: Time Slider Reference



3.1 Changing the time of day

- 3.1.1 To change the time of the current view, locate the slider inside the HUD display at the bottom of the page.
- 3.1.2 Once you do, locate the current place of the marker on the slider scale.



Figure 3.2

- 3.1.3 Left click on the marker and drag it to the desired time you want to view. This will then change the colours of the chairs and graphs according to the time.

- 3.1.4 Alternatively, you can click the back and forward keys located underneath the slider to move time forwards or backwards half an hour accordingly.

3.2 Changing the day

- 3.1.5 To change the day currently on display, locate the date at the left side of the slider on the HUD.
- 3.1.6 From here, click the drop-down arrow next to the date and a list should appear above it listing the dates available to view.



Figure 3.3

- 3.1.7 Click your desired day and the map should update accordingly.

3.3 Using the play feature



Figure 3.4

- 3.3.1 Locate the play button underneath the slider on the HUD at the bottom of the screen.
- 3.3.2 Left click this button and the map will now update incrementally, updating the colours of the chairs and graphs according to the time.

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