



Brigham and Women's Hospital

Kiosk Application User Guide

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Thank you to Brigham and Women's Faulkner Hospital
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1 Introduction

1.1 Scope and Purpose

This Application for Brigham and Women's Hospital was developed to assist hospital employees and administrators with their daily tasks, as well as train students in the WPI CS 3733 Software Engineering class. Agile methodology was used during the development, where the team focused on the need of the users to prioritize tasks and organize the design process.

1.2 Process Overview

In the application, all users can access the get directions function for navigating in the hospital. An employee can book rooms in the flexible workspace on the fourth floor and make service requests. In addition, an administrator has the power to manage employees, service requests, edit maps, and change kiosk settings. To create a more relaxing work environment, a Fun Corner was implemented with a snake game to help people in the hospital destress.



2 Process and Workflow

2.1 Main Menu

2.1.1 View Maps

If the user would like to see all the maps of the hospital, they can approach the kiosk and select the desired tab on the left-hand side.





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2.1.2 View current Time

The user can also check the current date and time in the upper left corner.





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2.1.3 Access Main Functionalities

To access any main functionalities, the user can either click on the big buttons on the bottom right corner or the main menu buttons on the top.





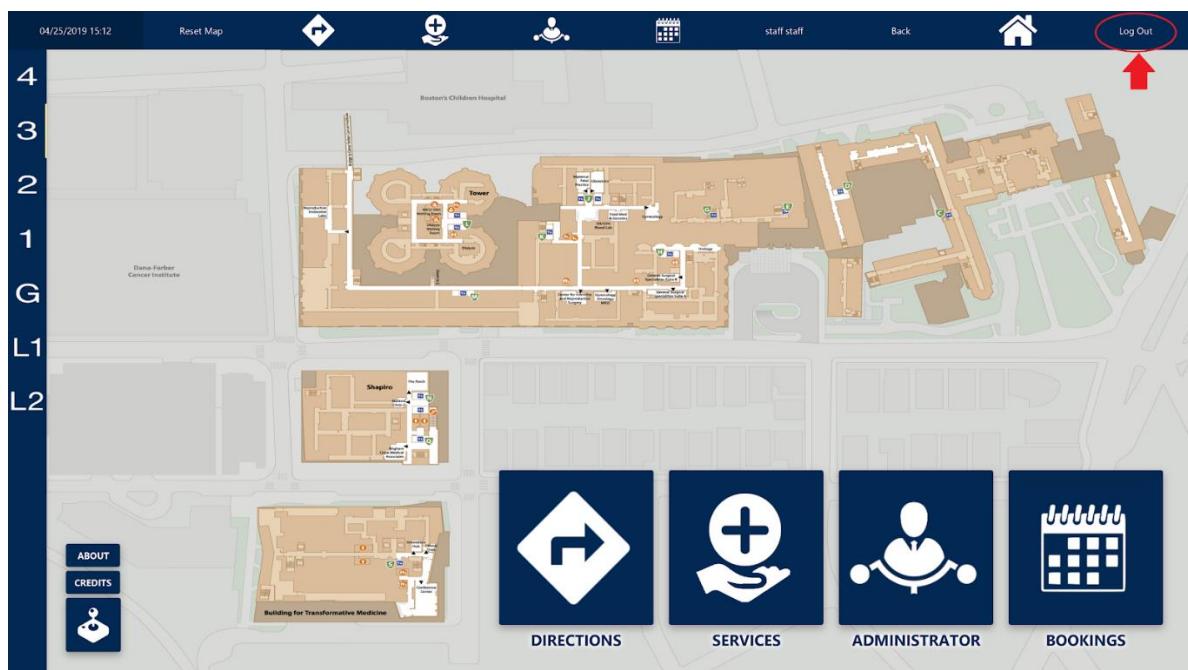
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2.1.4 Direct Login

If the user would like to log in first, they can click on the “login” button.



To log out of their account, click on the “log out” button on top to protect your privacy.





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2.1.5 Navigating the Application

At any point in the application, the user may click on the “home button” to go back to home page.



Or click on “back” to go back to the previous page.





2.1.6 Timeout Session

The application will automatically time out to the home page if no one has accessed it for a certain amount of time. The time out time period can be set by an administrator in the Admin page. When time out happens, the application will automatically return to main page and log the user out.

2.1.7 Acknowledgement

Information about the team and API's used in the application can be found in the “About” and “Credit” page on the bottom right corner.

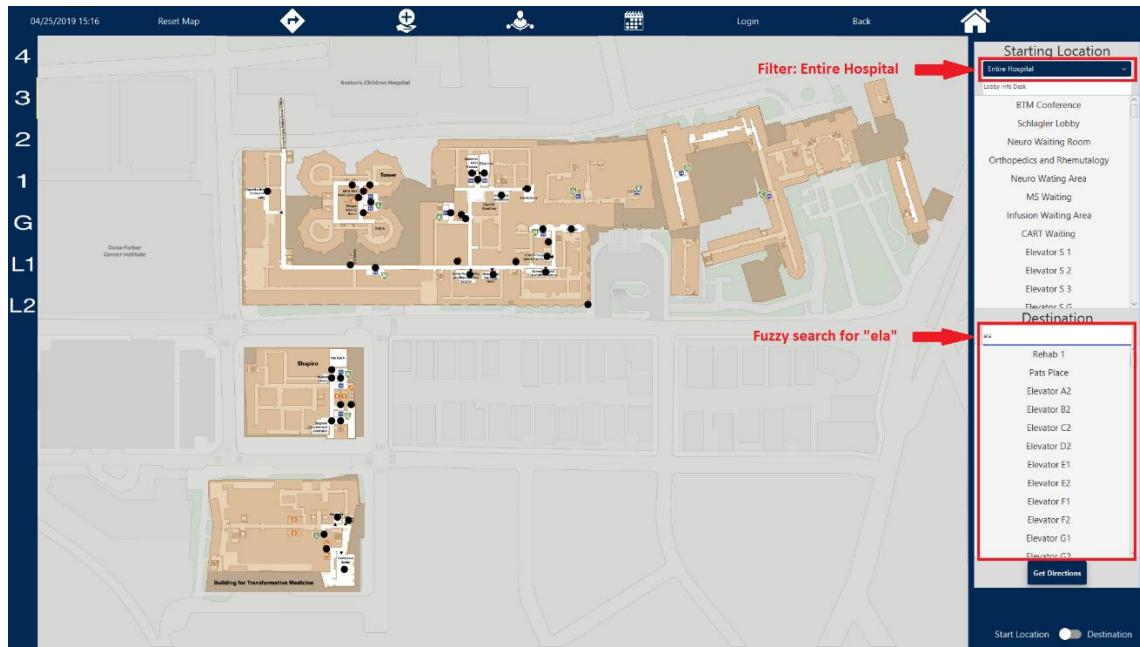




2.2 Get Directions

After the user has clicked on the get direction button, they can select a start and destination location. There are multiple ways to search for the start and destination locations.

1. The user knows the name of the two locations: simply search for the names of the locations in the search bars. Fuzzy search is implemented so that the user can be less explicit.

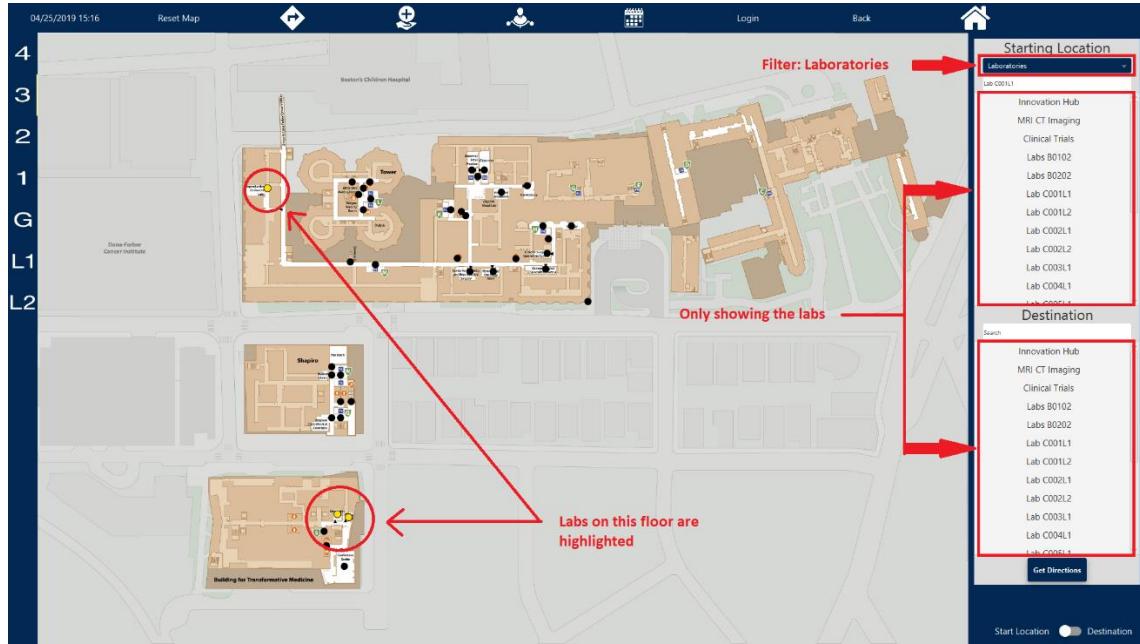


2. The user knows the types of the two locations, but is not certain about the name: click on the filter option above and select the desired type. The selection box presents all

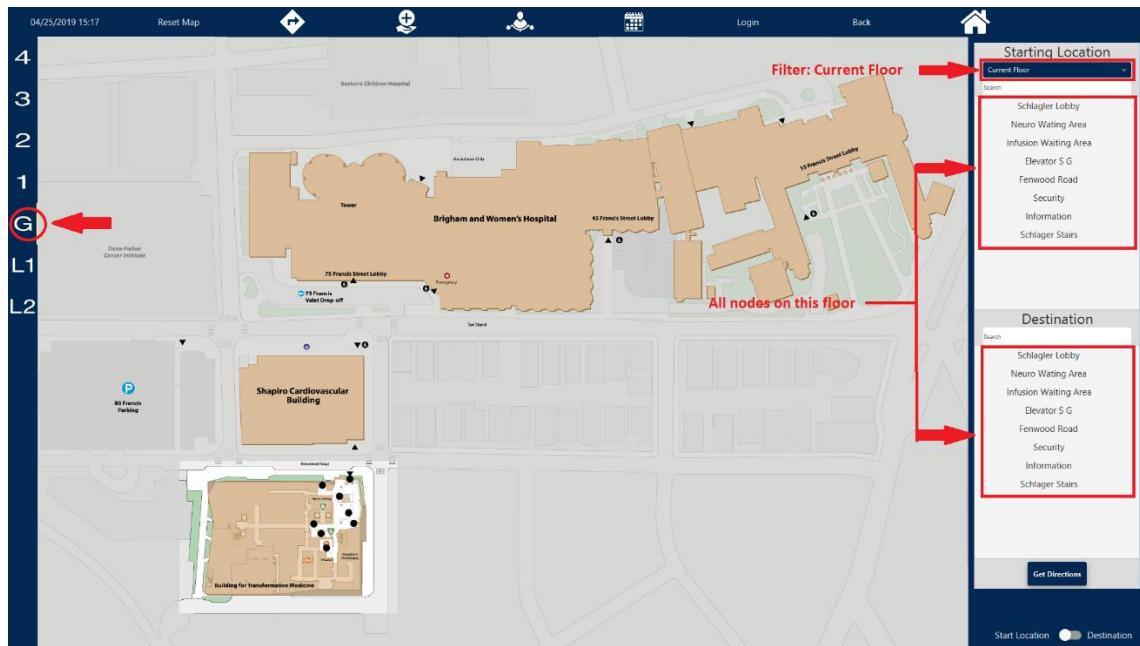


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locations with the designated type.



3. The user knows the floor of the two locations, but not the exact locations on the map: click on the desired floor tab and search through the selection box for the locations.





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4. The user knows the locations on the map and needs to get the directions: go to the floor and click on the location on the map to enter the start and destination locations. The Toggle on the bottom switches between start location and destination. On the map, start location will be marked green, and the destination will be marked red.

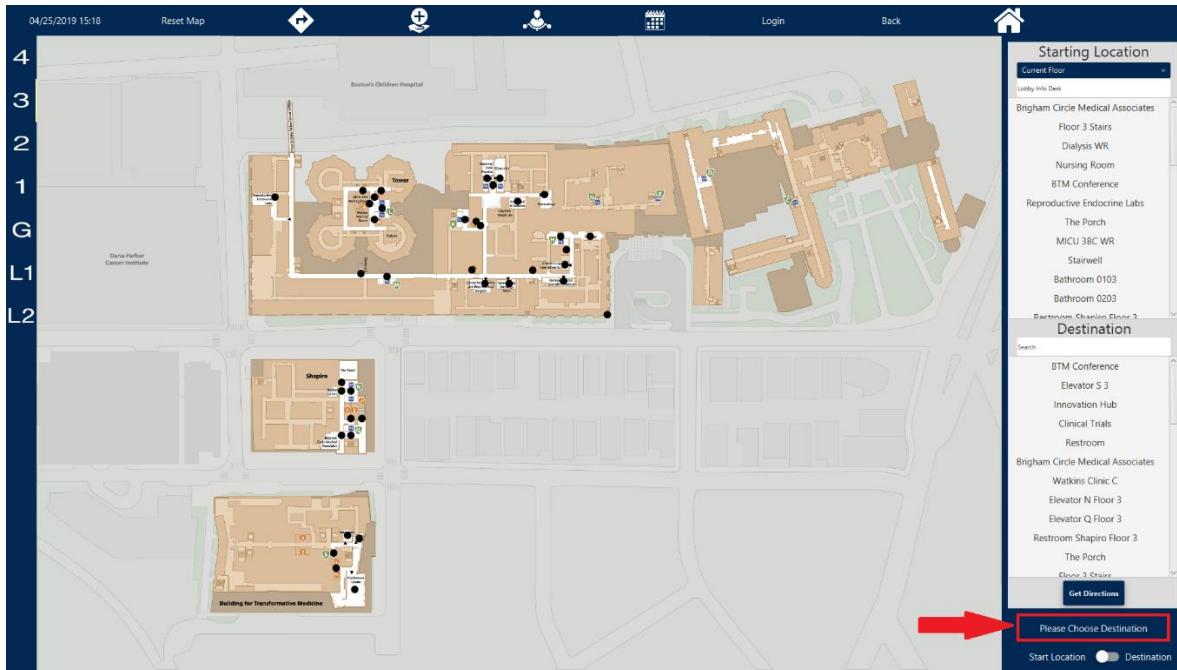


After the user has selected both start and destination locations, they can click on the get directions button at the bottom right corner. If either field were not filled, an error message



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would be displayed.



When on the directions result page, the user will still have access to the main menu bar on top. On the left side, the tabs not only indicate the floor, but also the steps of the path. In the middle, the user will see a visual representation of the path on a selected floor. Red signifies the end of the path on that floor and green represents the start of the path on the floor. An animated dot will also indicate direction by traveling along the path. The user can mouse



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over the start and end locations to see the name of them.



On the left side, the start and destination locations are displayed on top. Textual directions are displayed in the box underneath. Selecting the step will automatically switch to the corresponding map.

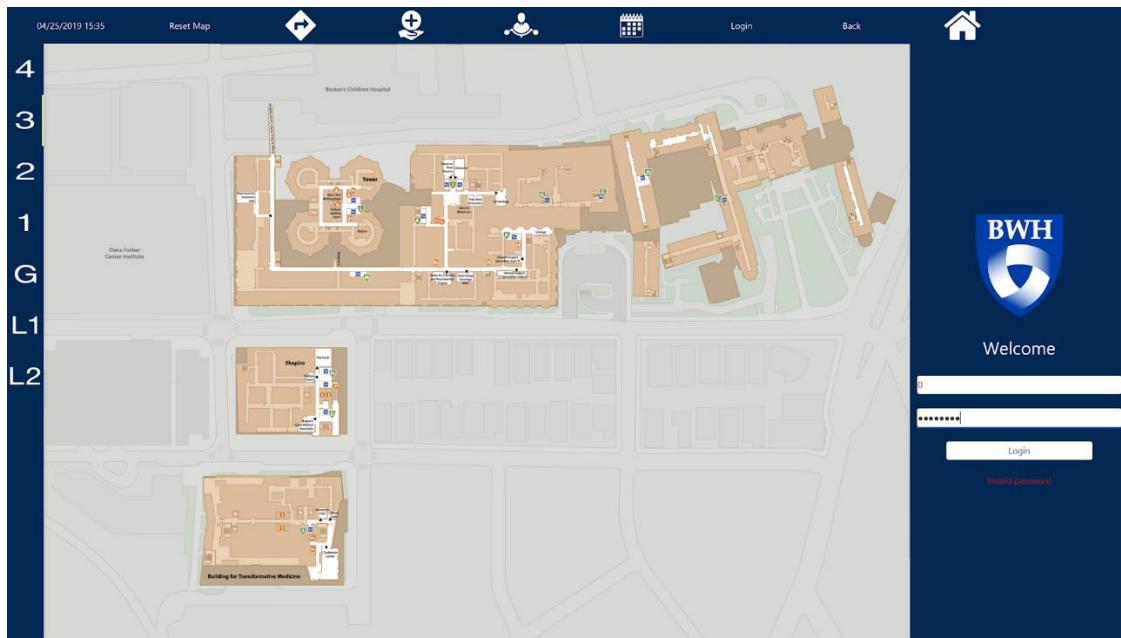




2.3 Log in

Users of the application have three tiers of accessibilities. The regular users can get directions in the hospital. The hospital employees can request services and book rooms. The administrators can manage employees, service request, change kiosk settings, etc. To access the functionalities granted to the user, the user needs to first log in with their unique identification (UID), then the system will check the UID and allow user to perform certain tasks. There are a few ways to log in.

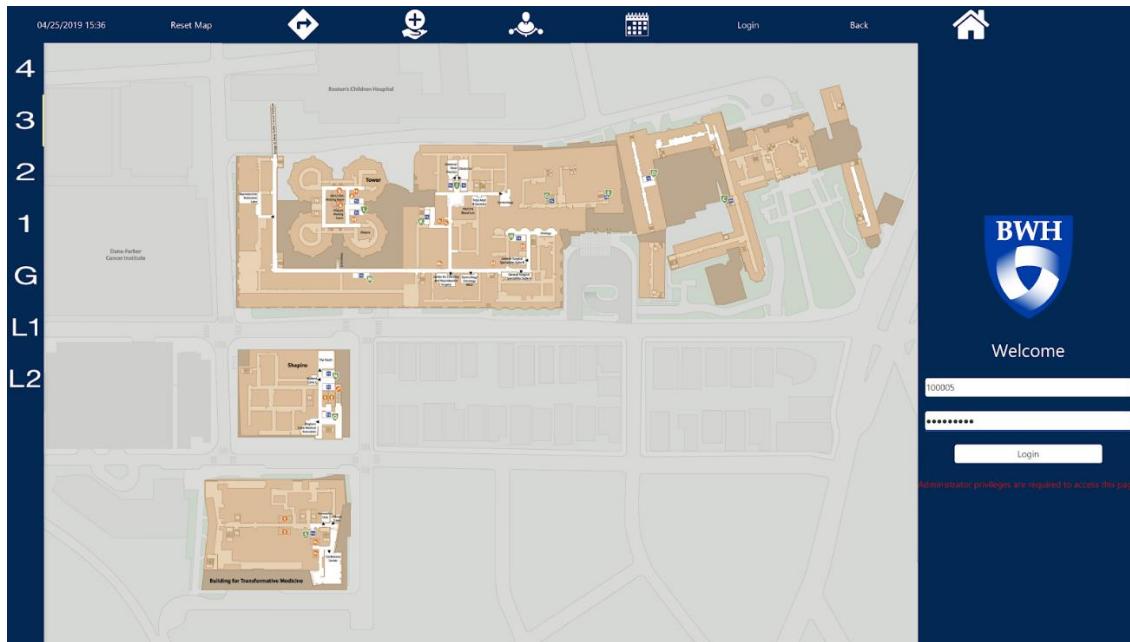
1. The user wants to directly log in to the application before selecting any functionalities: They can click on the “Login” button in the main menu as explained in Section 2.1.4.
2. The user wants to make a service request or book a room: Only hospital employees and administrators can make service requests or book rooms, so they will be prompted to enter their user name and password.





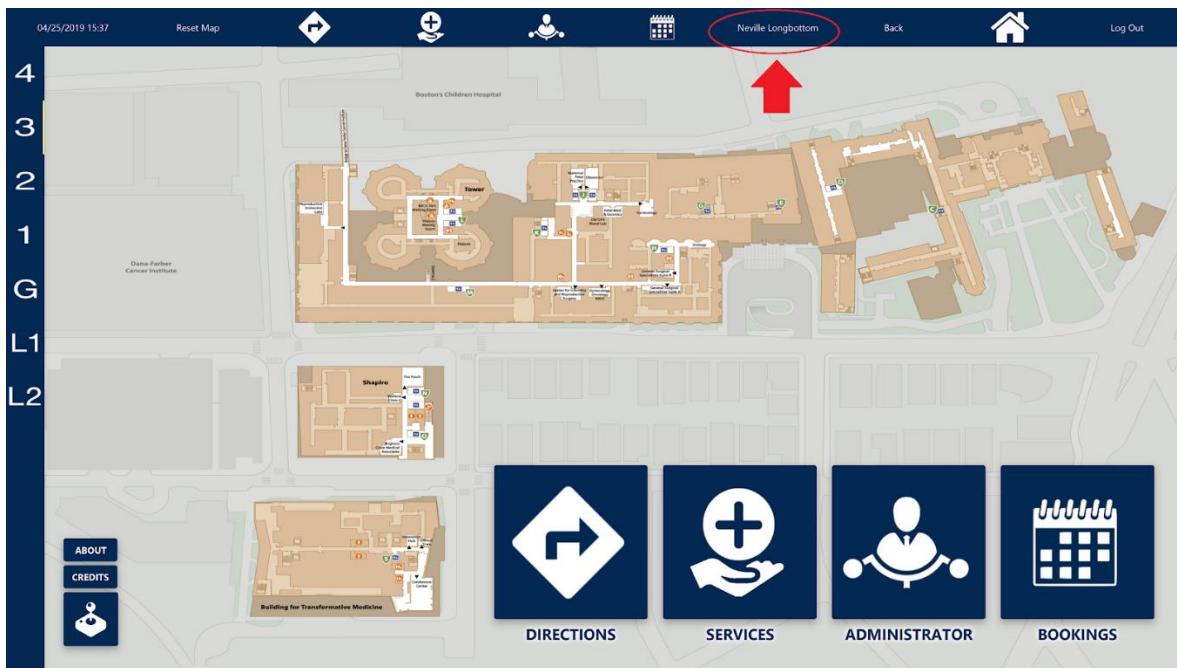
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3. The user wants to access administrative functionalities: Only administrators can access these functions, so they need to enter the administrative ID and password to enter.



2.3.1 User Profile Page

Hospital employees and administrators have profile pages. They can access it after they log in by clicking on their name on the main menu bar.





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On the personal profile mainly consists of three parts:

1. Information zone: the user may edit their email and whether they would like to receive email notifications.

The screenshot shows the personal profile section of the kiosk application. At the top, it displays the date (04/25/2019 15:43), a 'Reset Map' button, and a user greeting 'Hello, Neville Longbottom'. Below this is a red-bordered input field for 'Email:' with a red arrow pointing to it. Underneath are three toggle switches: 'I would like to receive emails:', 'Email me about requests assigned to me:', and 'Email me about bookings that I make:'. Below these are two tables: 'My Service Requests' and 'Service Requests Assigned to Me', both listing various service requests with columns for Created, Type, Issue, Assigned To, and Resolve. To the right of the profile section is a calendar view for Thursday, 25. April 2019, showing a red dot at 3:41 PM.

2. Manage service requests: the user can manage both the requests they made and the requests they are assigned to.

- a. For the requests they made, they can view the details and mark it as resolved.

This screenshot shows the service request management zone. It features the same header and user information as the previous screenshot. The 'My Service Requests' table is highlighted with a red border and a red arrow pointing to its bottom right corner. The 'Service Requests Assigned to Me' table is also visible below it. To the right is a detailed calendar view for Thursday, 25. April 2019, with a red dot at 3:41 PM.



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- b. For the requests they are assigned to, they can view the details, mark it as resolved, and get directions to the location.

The screenshot shows the kiosk application interface. At the top, there is a header with the date (04/25/2019 15:43), a 'Reset Map' button, and a user greeting 'Hello, Neville Longbottom'. Below the header is a search bar with the placeholder 'Email:'. Underneath the search bar are three toggle switches: 'I would like to receive emails:' (on), 'Email me about requests assigned to me:' (on), and 'Email me about bookings that I make:' (off). The main content area is divided into two sections: 'My Service Requests' and 'Service Requests Assigned to Me'. Both sections have tables with columns for Created, Type, Issue, Assigned To, and Resolve/Find Path buttons. A red arrow points to the 'Find Path' button in the 'Service Requests Assigned to Me' section. To the right of these sections is a calendar for Thursday, April 25, 2019, showing a timeline from 10:00 AM to 10:00 PM. A red arrow also points to the 'Find Path' button in the 'Service Requests Assigned to Me' section.

When the user clicks on the “get path” button, they are redirected to the get directions main page, where the destination is automatically filled in according to the service request, and the start location is automatically the default kiosk location. If the user wished to change the start location, they may do so too.

This screenshot shows the 'Starting Location' and 'Destination' selection screen. On the left is a map of the hospital campus with various buildings labeled. On the right, there are two dropdown menus. The 'Starting Location' dropdown is set to 'Current Floor' and lists 'Sally Info Desk', 'Brigham Circle Medical Associates', 'Dialysis WR', 'Reproductive Endocrine Labs', 'The Porch', 'MICU /BC WR', and 'Nursing Room'. The 'Destination' dropdown is set to 'Elevator S 2' and lists 'Elevator S 3', 'Elevator N Floor 3', 'Elevator Q Floor 3', 'Innovation Hub', 'Restrooms', and 'The Porch'. At the bottom right is a 'Get Directions' button. Below the dropdowns are 'Start Location' and 'Destination' buttons with toggle switches.



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3. View rooms booked by the user: On the calendar on the right side, the user can view all the rooms they booked.

The screenshot shows the kiosk application interface. On the left, there are two tables: "My Service Requests" and "Service Requests Assigned to Me". A red arrow points from the top right towards the calendar on the right. The calendar displays a single booking for 3:41 PM on Thursday, April 25, 2019.

Created	Type	Issue	Assigned To	Resolve
2019-04-25 15:41:17.606	Custodian	fgh		Resolve
2019-04-25 15:41:34.978	Delivery	hello		Resolve
2019-04-25 15:41:42.318	Maintenance	sdfghj		Resolve
2019-04-25 15:42:02.346	Religious	me you		Resolve

Created	Type	Issue	Requested By	Resolve	Find Path
2019-06-01 08:30:00.0	LanguageInterpreter	Australian English	Albus Dumbledore	Resolve	Find Path
2019-06-01 10:00:00.0	LanguageInterpreter	Australian English	Anakin Skywalker	Resolve	Find Path
2019-06-01 14:30:00.0	Transportation	Jeff needs his stool samples pic...	Tony Stark	Resolve	Find Path
2019-06-01 23:00:00.0	LanguageInterpreter	Australian English	Kale Chips	Resolve	Find Path

Thursday, 25. April 2019

10:00 AM - 10:00 PM

If the user wishes to see the room schedule on a weekly or monthly view, they can click on the top buttons to switch views.

The screenshot shows the kiosk application interface. A red arrow points from the top right towards the calendar on the right. The calendar displays a single booking for 3:41 PM on Thursday, April 25, 2019.

Created	Type	Issue	Assigned To	Resolve
2019-04-25 15:41:17.606	Custodian	fgh		Resolve
2019-04-25 15:41:34.978	Delivery	hello		Resolve
2019-04-25 15:41:42.318	Maintenance	sdfghj		Resolve
2019-04-25 15:42:02.346	Religious	me you		Resolve

Created	Type	Issue	Requested By	Resolve	Find Path
2019-06-01 08:30:00.0	LanguageInterpreter	Australian English	Albus Dumbledore	Resolve	Find Path
2019-06-01 10:00:00.0	LanguageInterpreter	Australian English	Anakin Skywalker	Resolve	Find Path
2019-06-01 14:30:00.0	Transportation	Jeff needs his stool samples pic...	Tony Stark	Resolve	Find Path
2019-06-01 23:00:00.0	LanguageInterpreter	Australian English	Kale Chips	Resolve	Find Path

Thursday, 25. April 2019

10:00 AM - 10:00 PM



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If the user would like a local copy of the calendar view, they can print the current calendar view to a pdf file by clicking on the print button.

The screenshot shows the Brigham and Women's Hospital Kiosk Application interface. At the top, there is a header with the date "04/25/2019 15:43", a "Reset Map" button, and a user profile "Hello, Neville Longbottom". Below the header, there are three toggle switches: "I would like to receive emails" (on), "Email me about requests assigned to me" (off), and "Email me about bookings that I make" (off). The main content area is divided into two sections: "My Service Requests" and "Service Requests Assigned to Me". The "My Service Requests" section lists four items:

Created	Type	Issue	Assigned To	Resolve
2019-04-25 15:41:17.606	Custodian	lgh		Resolve
2019-04-25 15:41:34.978	Delivery	hello		Resolve
2019-04-25 15:41:42.318	Maintenance	sdfghj		Resolve
2019-04-25 15:42:02.346	Religious	me you		Resolve

The "Service Requests Assigned to Me" section lists five items:

Created	Type	Issue	Requested By	Resolve	Find Path
2019-06-01 08:30:00.0	LanguageInterpreter	Australian English	Albus Dumbledore	Resolve	Find Path
2019-06-01 10:00:00.0	LanguageInterpreter	Australian English	Anakin Skywalker	Resolve	Find Path
2019-06-01 14:30:00.0	Transportation	Jeff needs his stool samples pls.	Tony Stark	Resolve	Find Path
2019-06-01 23:00:00.0	LanguageInterpreter	Australian English	Kale Chips	Resolve	Find Path

To the right of these sections is a calendar view for "Thursday, 25. April 2019". The calendar shows a timeline from 1:00 PM to 10:00 PM. A red arrow points to the print icon (a printer symbol) located at the top left of the calendar header. The print icon is circled in red.



2.4 Request Service

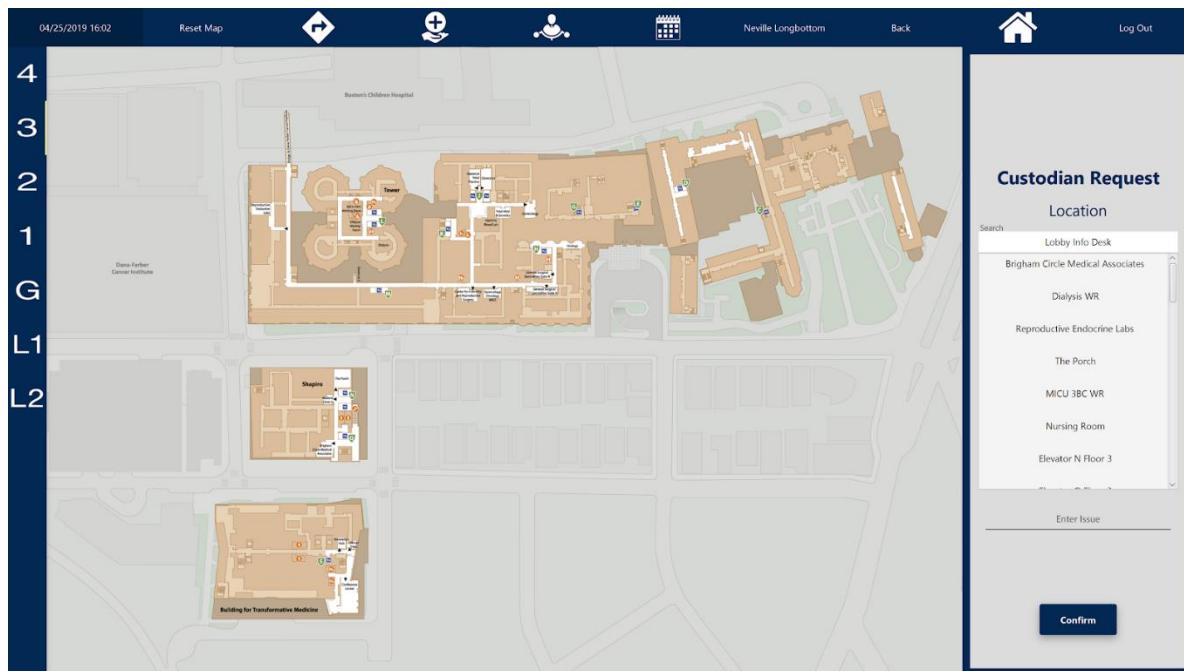
After the user has successfully logged in, they may select whichever service they want to request.





2.4.1 Custodian Service

When the user wants to request a custodian service, they need to select a location where custodian service is needed.



After the location is selected, the user must enter a message briefly describing the type of issue. If either of the fields were not filled out, clicking on the “confirm” button would display an error message prompting the user to enter additional information.

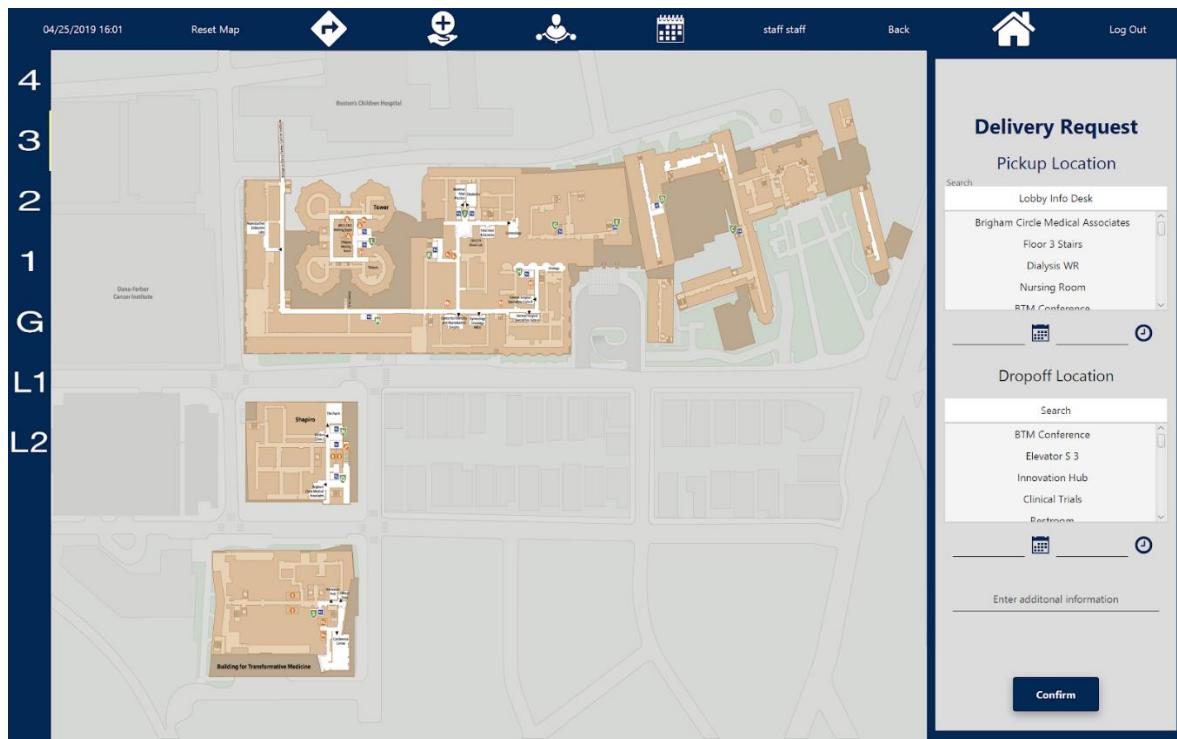
When the user has filled out all the fields and clicked “confirm”, the application will record the service request, which can be viewed by the administrator, and go back to the service request main screen.



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2.4.2 Delivery Service

When the user wants to request a delivery service, they will select a location for pickup location and drop-off location.



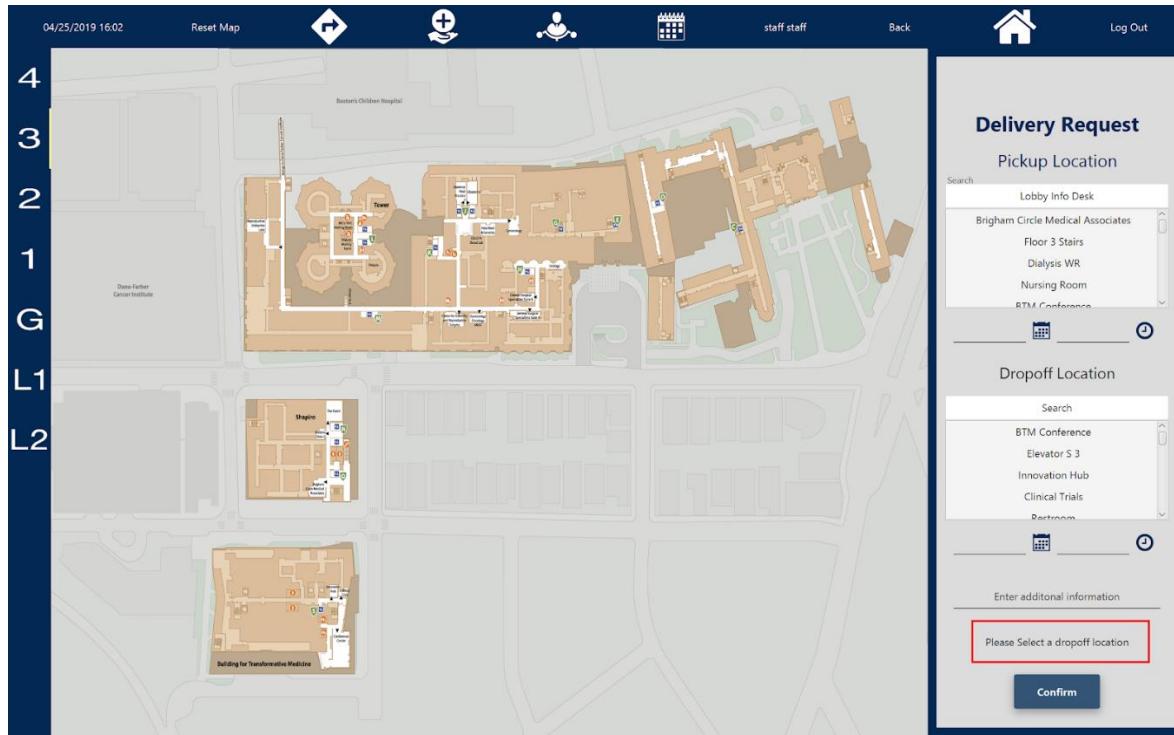
The user will also need to select the pickup time and drop-off time. Drop-off time must be after the pickup time, otherwise the application will display an error message when you



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click “confirm”.

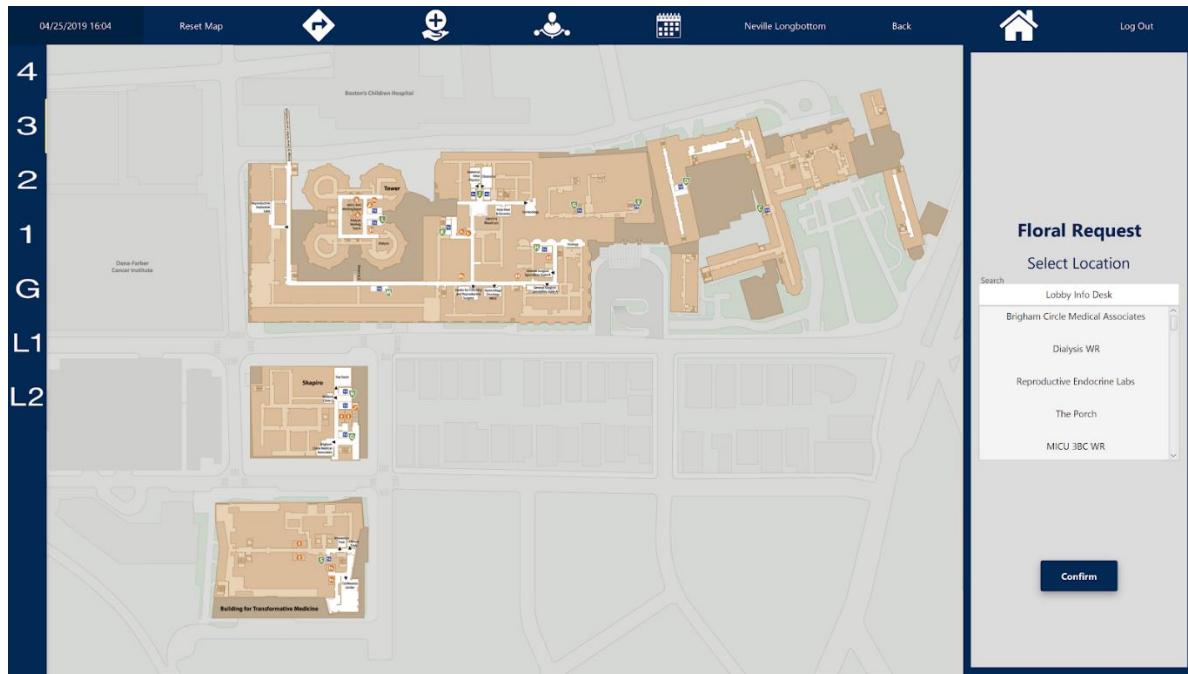


When the user has filled out all the fields and clicked “confirm”, the application will record the service request, which can be viewed by the administrator, and go back to the service request main screen.



2.4.3 Floral Service

The floral service is an API that we produced, which is why it looks different from the other service requests. However, the user still needs to designate the location of the flower delivery”.





In addition, the user can specify what color flower they want to deliver. They can choose on the color picker and the floral pattern on the right side will show a previous of the flower.

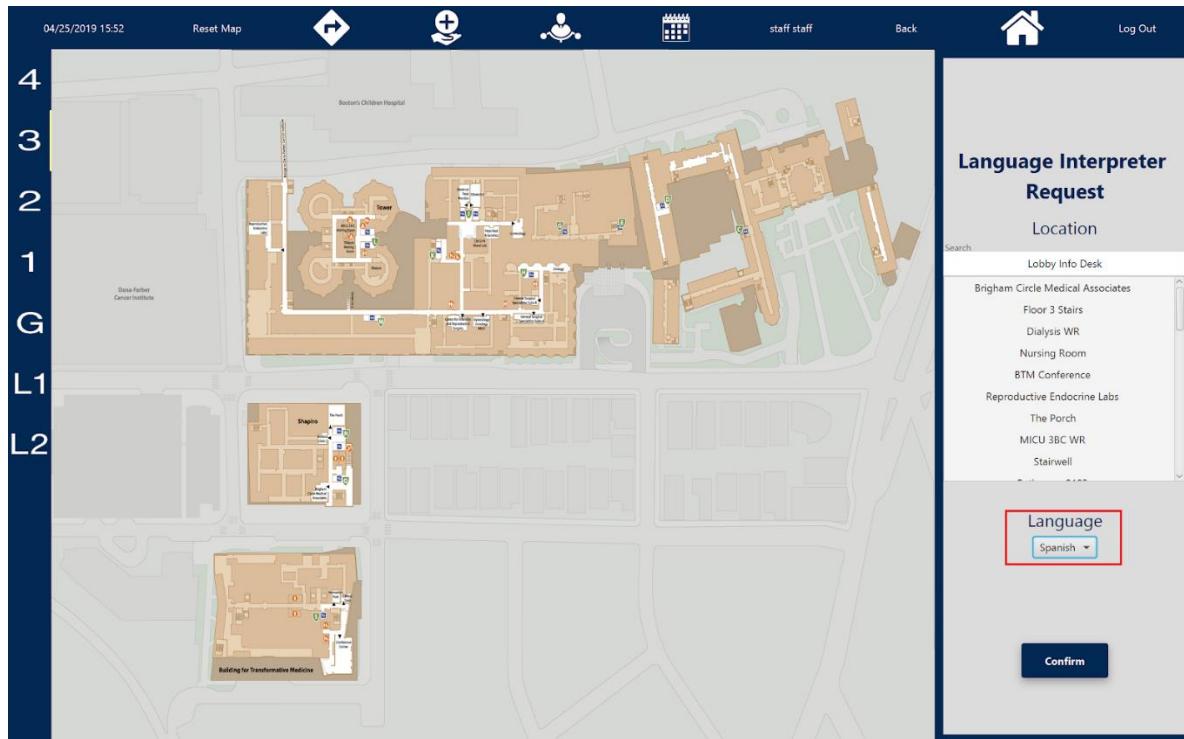
The screenshot shows a computer application window titled "Floral Request". On the left, there is a vertical sidebar with the "BWH" logo at the top, followed by two buttons: "Edit Employees" and "View Requests". The main content area has a title "Floral Request". It includes fields for "Location" (set to "Dialysis Waiting Room"), "Color" (set to "#673AB7"), "Quantity" (an empty input field), "Delivery Date" (an empty input field with a calendar icon), and "Delivery Time" (an empty input field with a clock icon). To the right of these fields is a large, stylized illustration of a purple rose with green leaves and a yellow stem. At the bottom is a dark blue button labeled "Confirm Request".

The user will also fill in the quantity of flowers and delivery time of the floral service before they confirm the floral service request. When the user has filled out all the fields and clicked “confirm”, the application will record the service request, which can be viewed by the administrator, and go back to the service request main screen.



2.4.4 Interpreter Service

Similar to the custodian service, the interpreter service first prompts the user to select a location. Then the user can select the language they need interpreted from a dropdown menu.





2.4.5 IT Service

Same as the custodian service request with minor changes.

The screenshot shows a kiosk application interface. At the top, there is a header with the date "04/25/2019 15:54", a "Reset Map" button, and several icons: a double arrow, a plus sign, a person, a calendar, and two staff symbols. To the right are "Back", "Log Out", and a home icon. The main area features a detailed floor plan of the hospital campus. On the left side of the map, there are vertical labels: "G" at the top, followed by "L1" and "L2". The map includes labels for "Dana-Farber Cancer Institute", "Brigham Children's Hospital", "Tower", "Shapiro", and "Building for Transformative Medicine". A search bar labeled "Search..." is positioned above a dropdown menu titled "Location". The dropdown menu lists various locations with their descriptions:

- Lobby Info Desk
- Brigham Circle Medical Associates
- Floor 3 Stairs
- Dialysis WR
- Nursing Room
- BTM Conference
- Reproductive Endocrine Labs
- The Porch
- MICU 3BC WR
- Stairwell
- Bathroom 0103
- Bathroom 0203
- Restroom Shapiro Floor 3

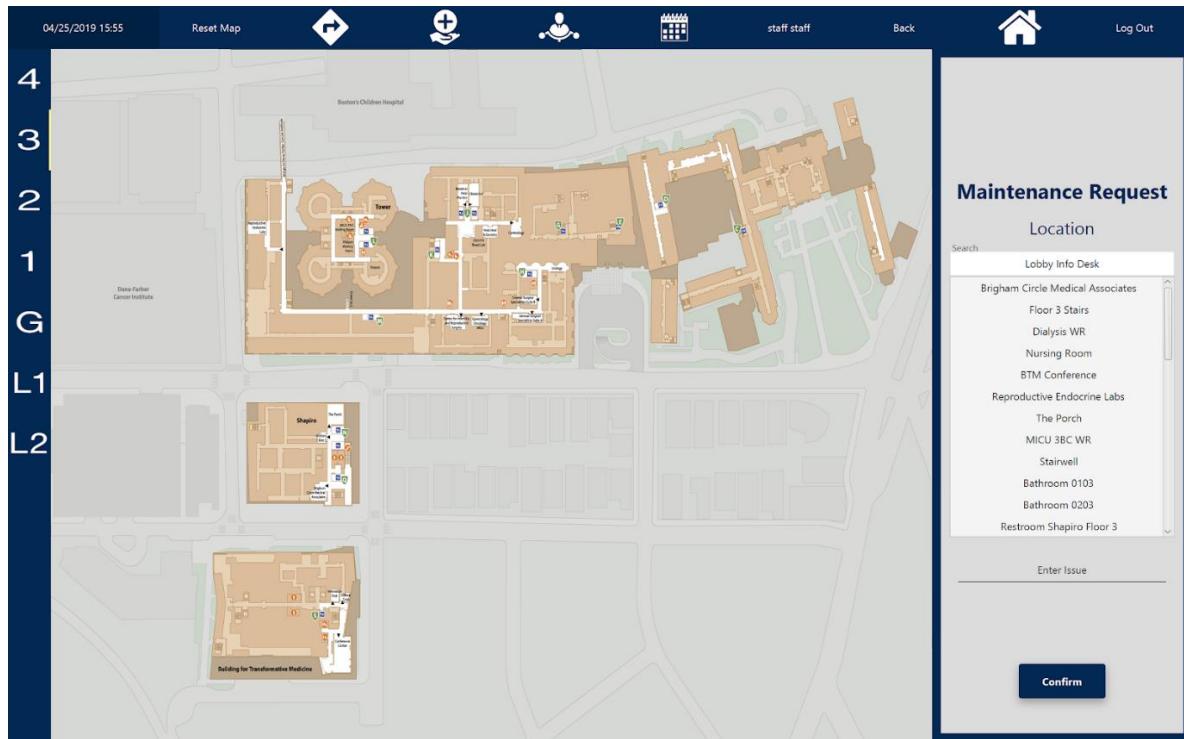
Below the dropdown is a text input field labeled "Enter Issue" and a "Confirm" button.



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2.4.6 Maintenance Service

Same as the custodian service request with minor changes.



2.4.7 Religious Service

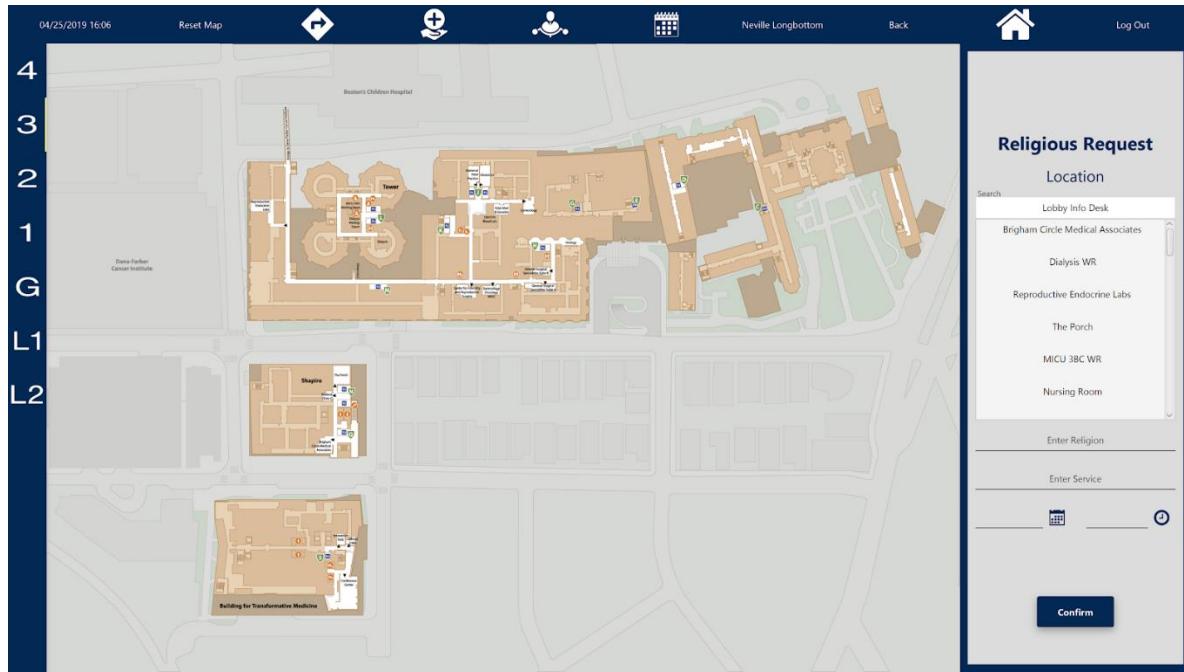
Similar to the custodian service, the religious service first prompts the user to select a location. Then the user can enter the religion and the type of service they would like to



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receive.



Then the user can select a date and time for their religious service. When the user has filled out all the fields and clicked “confirm”, the application will record the service request, which can be viewed by the administrator, and go back to the service request main screen.



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2.4.8 Security Service

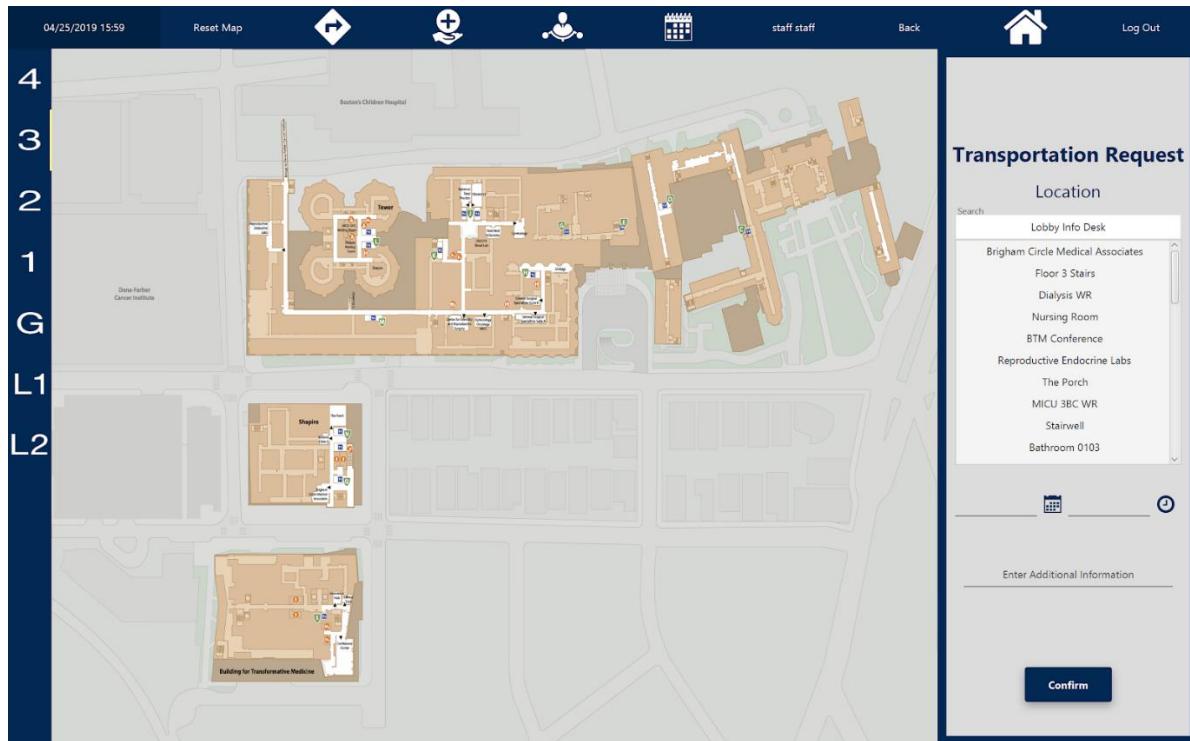
Same as the custodian service request with minor changes.

The screenshot shows the Brigham and Women's Hospital Kiosk Application interface. On the left is a map of the hospital campus with various buildings and floor levels (G, L1, L2, 3, 4) labeled. A specific location on the map is highlighted with a white circle. At the top of the screen are several icons: a timestamp (04/25/2019 15:57), a 'Reset Map' button, a location pin icon, a staff icon, a calendar icon, a 'staff staff' button, a 'Back' button, a home icon, and a 'Log Out' button. To the right of the map is a sidebar titled 'Security Request'. It contains a search bar with the placeholder 'Search...' and a list of locations. The list includes: Lobby Info Desk, Brigham Circle Medical Associates, Floor 3 Stairs, Dialysis WR, Nursing Room, BTM Conference, Reproductive Endocrine Labs, The Porch, MICU 3BC WR, Stairwell, Bathroom 0103, Bathroom 0203, and Restroom Shapiro Floor 3. Below the list is a text input field labeled 'Enter Issue' and a 'Confirm' button at the bottom.



2.4.9 Transportation Service

Similar to the custodian service, the user needs to enter the location and comment. In addition, a date and time is required for this transportation service. When the user has filled out all the fields and clicked “confirm”, the application will record the service request, which can be viewed by the administrator, and go back to the service request main screen.

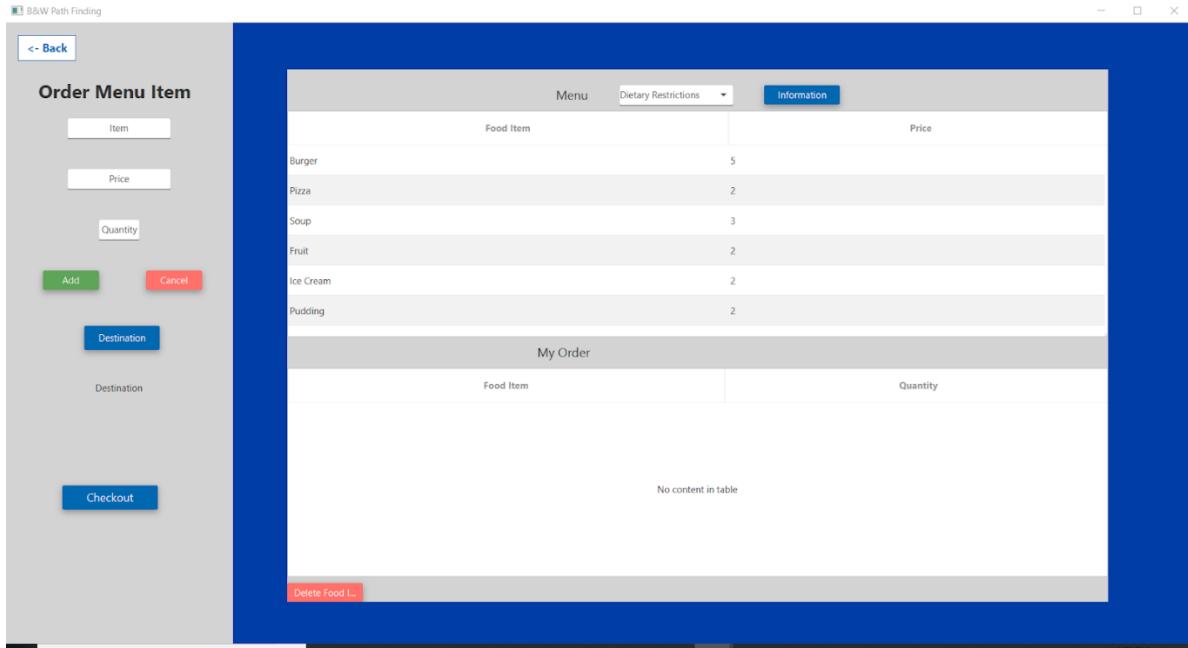




2.4.10 Food Delivery Service

The food delivery is an API provided by the class, and it has its own database for employees and locations. When click on the food icon on the main service menu, a pop up will show.

Click on the “Staff Menu Order” will bring you to the ordering page. The user can select menu foods, to add to order, set the delivery location, can confirm.





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After the order is submitted, the user can then assign the order to an employee on the main page.

Worker ID	Username
worker1	worker1Username
worker2	worker2Username

Export Workers CSV

If the user wishes to see the records to of foods and orders, they can click on the “Report” button and see the statistics.

Food	# of Orders
Burger	2
Cereal	5
Milk	6

Type	# of Orders
Diabetic	11
Gluten Free	6

Pie Chart Data:

Food Type	Percentage
Burger	~20%
Cereal	~40%
Milk	~40%

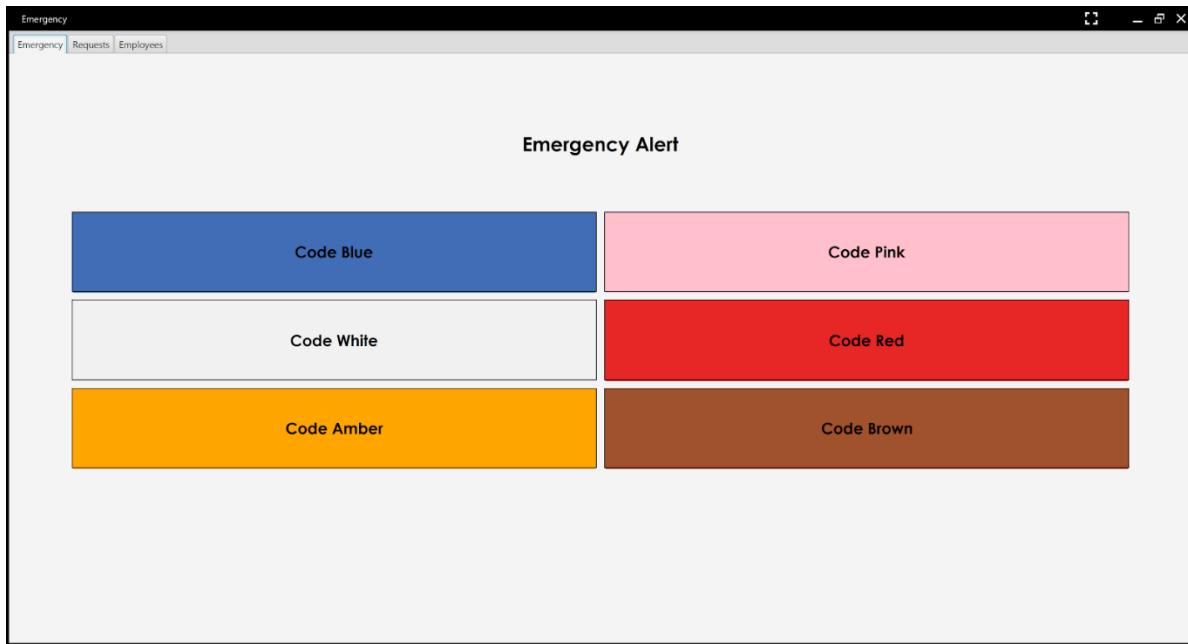
Bar Chart Data:

Type	# of Orders
Diabetic	11
Gluten Free	6
Vegan	0



2.4.11 Emergency

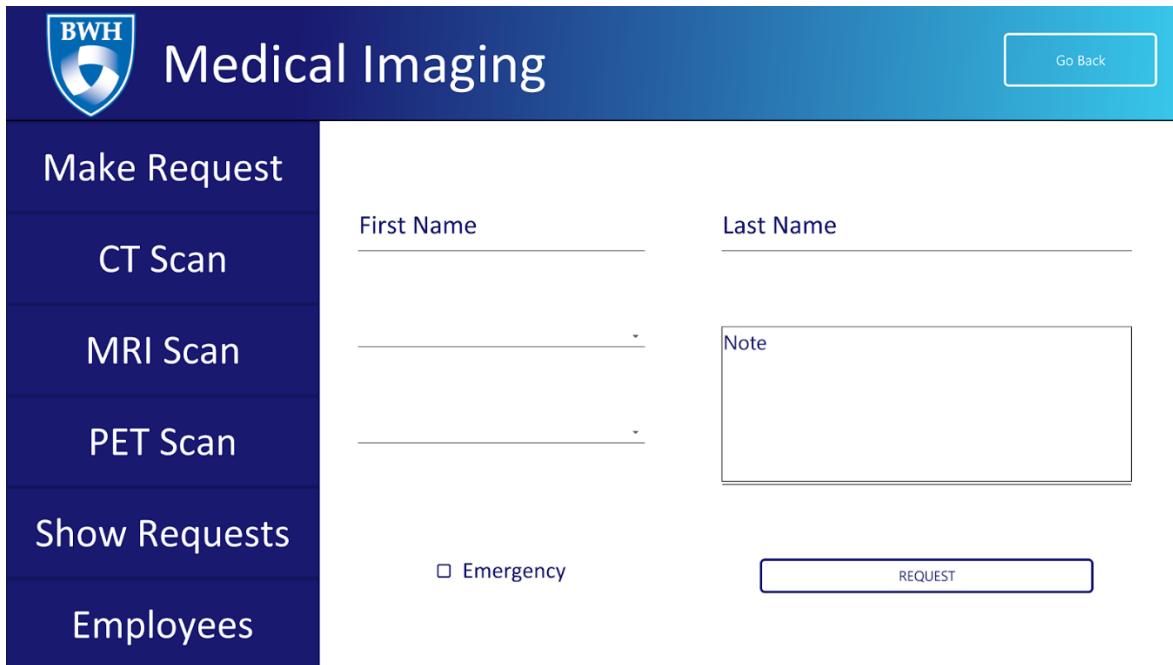
The Emergency option is an API provided by team B. This API allows the user to quickly select an international standard color code for emergency. As the emergency is reported, the camera of the computer or kiosk will automatically take a picture of the person requesting it for security reasons.





2.4.12 Imagining Booking

The Imaging Booking is an API provided by team A. This API allows the user to schedule imaging like MRI for patients. The user can fill out all the fields in the main page and submit the imaging booking to the queue.



The screenshot shows the 'Medical Imaging' application interface. On the left sidebar, there are several options: 'Make Request', 'CT Scan', 'MRI Scan', 'PET Scan', 'Show Requests', and 'Employees'. The 'Make Request' option is currently selected. The main area has fields for 'First Name' and 'Last Name', both with dropdown menus below them. There is also a 'Note' text area and a checkbox for 'Emergency'. A 'REQUEST' button is at the bottom right. A 'Go Back' button is in the top right corner of the header.

The queue will organize the list of imaging books by time and whether it is an emergency.



The screenshot shows the 'Medical Imaging' application interface. The sidebar options are the same as the previous screen. The main area displays a table titled 'Mark Completed' with columns: Last Name, First Name, Machine Type, Body Part, Time Reque..., Note, Emergency?, and Is Complete...'. The first row of the table contains the values: 'ids', 'asd', 'MRI', 'Torso', 'Thu Apr 25 16:45:30 ...', 'adff', 'No', and 'No'. Below the table are several empty horizontal lines, likely representing additional rows in the list.

Last Name	First Name	Machine Type	Body Part	Time Reque...	Note	Emergency?	Is Complete...
ids	asd	MRI	Torso	Thu Apr 25 16:45:30 ...	adff	No	No



2.5 Administrative Functions

After the administrator has logged in, they have access to additional functionalities unique to the administrator

2.5.1 Manage Service Requests

The admin can view all the service requests in the database and manage them. On the left-hand side, there is a list with all service requests. The service requests are marked by Type – location – message.

04/25/2019 16:53 Reset Map + Staff staff Back Log Out

Select Service Request

About Service Request

Select Employee

Assign Employee

Resolve Request

LanguageInterpreter - Elevator S 02 - Australian English
LanguageInterpreter - Hallway to Elevator - Australian English
Transportation - Hall - Jeff needs his stool samples picked up
LanguageInterpreter - Hall - Australian English
Maintenance - Hall - Jeff broke his door
Custodian - MRI CT Scan Imaging - Jeff threw up
Custodian - Oral Medicine and Dentistry - Jeff threw up
Transportation - Hallway Intersection 13 Level 2 - Jeff needs his stool samples picked up
Floral - Hallway Intersection 23 Level 2 - 42 flowers requested
Delivery - Hallway Intersection 34 Level 2 - Jeff needs his meds
IT - Valet Service Level 2 - Jeff's computer broke
Security - Staircase Intersection 2 Level 2 - Jeff is yelling at patients
Maintenance - Abrams Conference Room - Jeff broke his door
Custodian - MICU 3BC Waiting Room - fgt
Delivery - Reproductive Endocrine Labs - hello
Maintenance - Nursing Room - sdfghj
Religious - Reproductive Endocrine Labs - me you



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When a service request is selected, if there are any additional information, they will be displayed in the information box in the middle top area.

This screenshot shows the 'Select Service Request' interface. On the left, a list of service requests is visible. One request, 'LanguageInterpreter - Elevator S 02 - Australian English', is highlighted. To the right, a modal window titled 'About Service Request' displays 'Pickup Time: 2019-06-02 14:30:00' and 'Pickup Location: Hall'. A red box highlights this modal window.

The admin can select an employee from the employees list that was prefiltered by their capability to fulfill a certain type of service request. Then click the “Assign Employee” button to assign the selected employee to the service request.

This screenshot shows the same interface as the previous one, but with a red oval circling the 'Assign Employee' button located on the right side of the 'Select Employee' panel. The 'Select Employee' panel lists several staff members: Karen Caren, Elie Hess, Neville Longbottom, Frodo Baggins, and Clint Barton. The 'Currently assigned: Neville Longbottom' message is also visible.



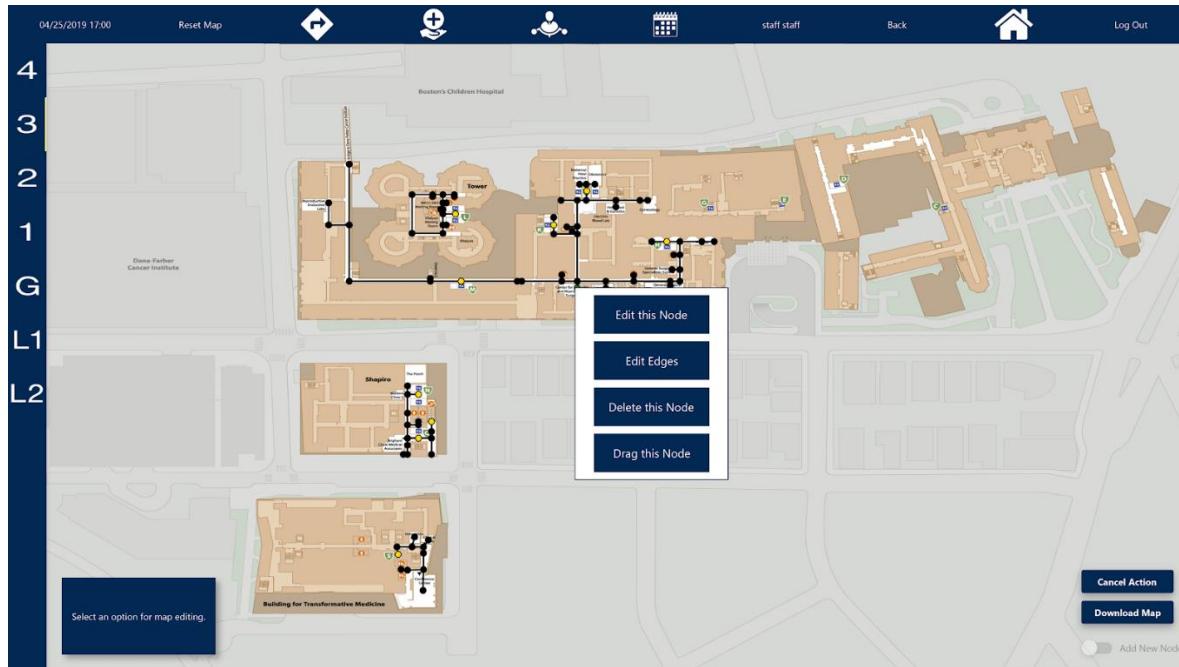
Note that the text “currently assigned to:” will change to the employee you just assigned. If they are signed up to receive email notification, they would get a message when they are assigned to a new service request.

The Admin also has the power to mark any service request as resolved when they select the service and click on the “Resolve Service” button.



2.5.2 Edit Map

The admin can visually edit the locations on the hospital maps by clicking on a circle (later referred to as a node, it represents a physical location in the hospital) on the image on the floor they want. The blue text box at the bottom left corner provides instructions for first time users.



There are five operations of be done with the nodes:

1. Adding a node: The admin wants to add a new node that is not on the map currently. They can switch the toggle on the bottom right corner to “add a node”, then click on the map to add a node at the point they click. A small window will show up with all the nodes information fields. The x, and y pixel locations and the floor fields are automatically set based on where the admin clicks. The user will need to manually fill in the building, node type, a long name, and a short name for the node, then click “Add node”.

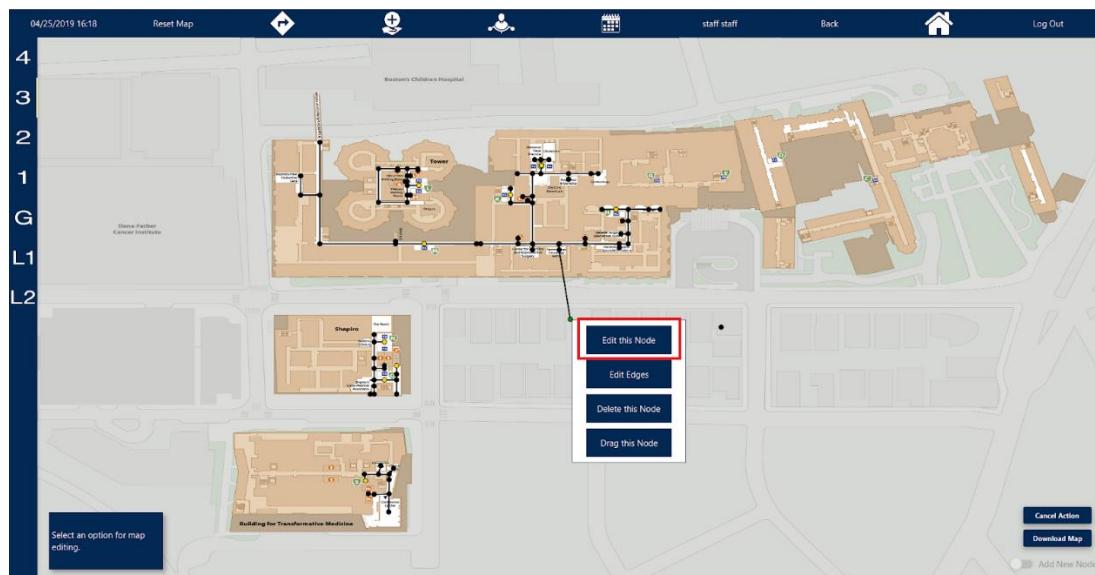


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After the node has been added, the admin can then access functions 2-5 normally on the new node.

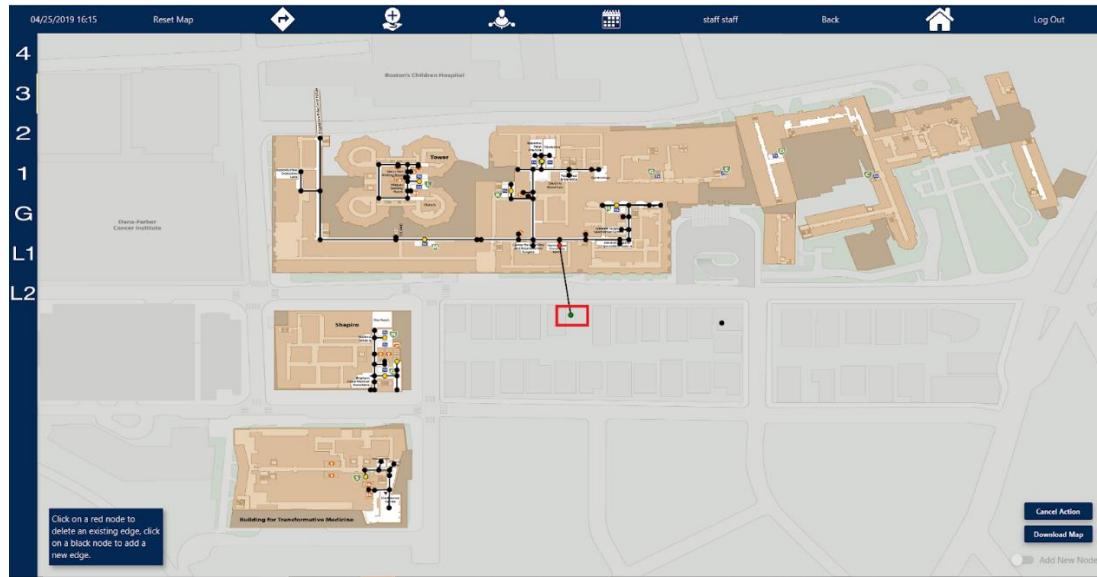
2. Editing information of a selected node: The admin wants to edit the information fields as mentioned in the previous bullet point of the node, such as the type and the name. They can click on the “Edit Node” button after they click on the selected node, then proceed to change the information in the fields. Click “Edit Node” on this page will persist the changes to the local database.



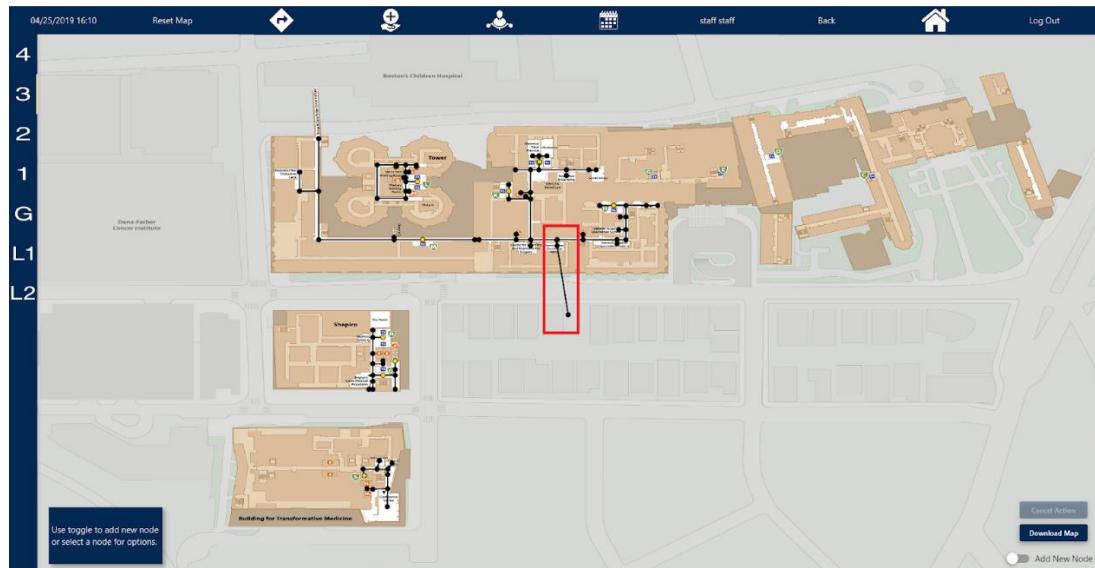


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3. Edit Edge: If the admin wants to edit or delete a connection between two nodes (referred to as an edge), with one side of the edge on the node they have clicked on, they can choose the “Edit Edge” option. The selected edge will turn green.



To add an edge, simply click on the node they want to connect to, and a line representing an edge will appear after the click indicating the edge has been successfully added.

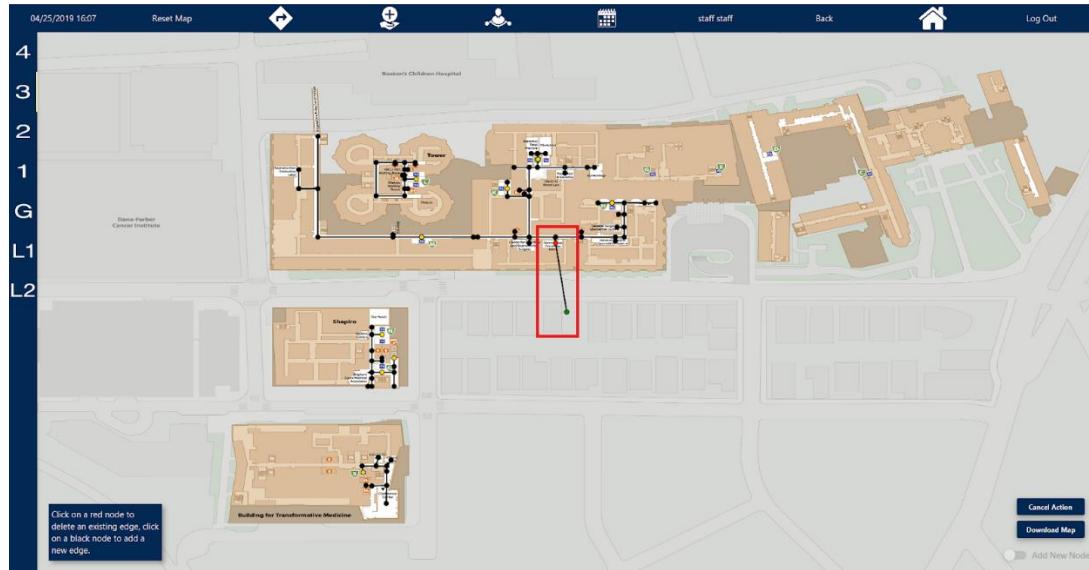


To delete an edge, click on one of the nodes. The selected node will turn green and its connected neighboring nodes will turn red. Then the admin can click on the red

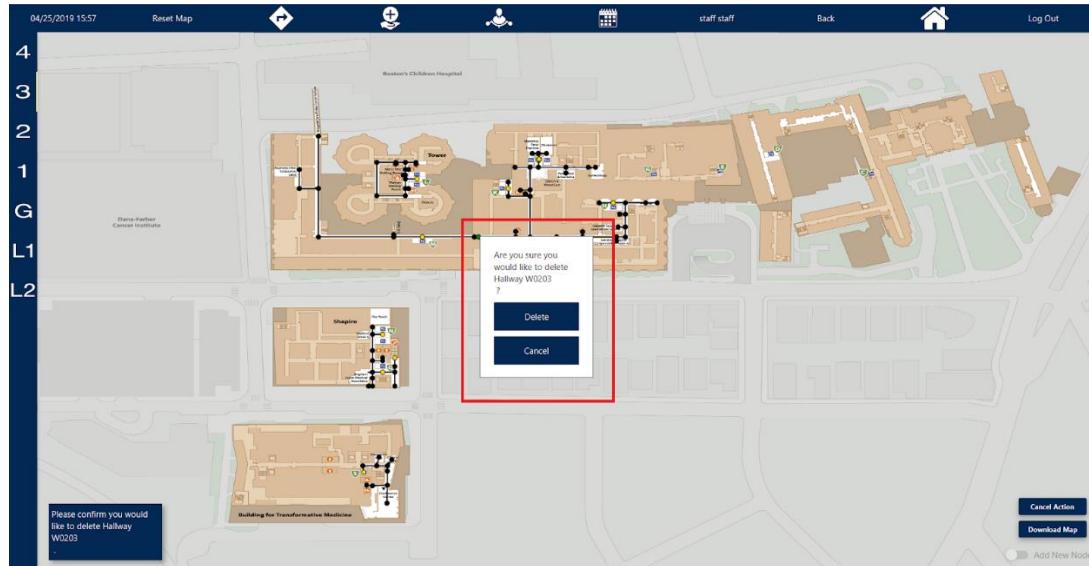


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node to select the edge. The edge will disappear indicating that it has been successfully deleted.



4. Delete Node: Click on the “Delete Node” option to delete the selected node. The window will ask for confirmation again, where they can “Delete” or “Cancel”. If the admin selects delete, the node, along with all of its edges, will be deleted from database and disappear from the map.



5. Drag Node: To drag the node to another location on map on the same floor the admin will click on the “Drag Node” option, then drag it to the new location. The edges of this node will stay in place to show the old location of the node during



dragging. Upon the mouse release, the edges will be connected to the node at the new location again.

If the admin wishes to cancel the action during editing, they can click on the “Cancel Action” on the bottom right corner (above the “add a node” toggle).

All the changes are persisted to the local database. To permanently change the map, download map locally using the “Download Map” button at bottom right corner (above the “add a node” toggle), then substitute the edges and node csv files with the new ones.



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2.5.3 Edit Employee

An admin has access to all the employee information and can manage them:

1. Add an employee: the admin can add an employee by filling in their information.

The screenshot shows a table of employee records. At the top, there are buttons for 'Add Employee' and 'Employee ID'. A message 'Employee added with ID: 23' is displayed above the table. The table columns are Employee ID, First Name, Last Name, Email, Services, and Active. The last row of the table, which corresponds to the newly added employee, has a red border around it. The 'Services' column for this row contains a checked checkbox, indicating the employee can fulfill service requests.

Employee ID	First Name	Last Name	Email	Services	Active
100005	Neville	Longbottom		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100006	Tom	Riddle		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100007	Luke	Skywalker		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100008	Obi-Wan	Kenobi		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100009	Han	Solo		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100010	Leia	Organa		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100011	Anakin	Skywalker		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100012	Sheev	Palpatine		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100013	Bilbo	Baggins		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100014	Frodo	Baggins		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100015	Samwise	Gamgee		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100016	Gandalf	the Grey		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100017	Aragorn	son of Arathorn		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100018	Tony	Stark		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100019	Steve	Rogers		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100020	Thor	Odinson		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100021	Bruce	Banner		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100022	Natasha	Romanoff		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100023	Clint	Barton		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100024	Jeff	Geoff		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100025	Kale	Chips		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
23				<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>

2. Edit the type of services they can fulfill: the admin can click on the services column to show a pop of all services. By changing the check boxes, the admin can change the employee's ability to fulfill a certain type of service request. When the employee is able to fulfill a service request, their name will appear in the employee assignment list as an option. The admin by default can fulfill all service requests.

The screenshot shows a table of employee records. The 'Services' column for each employee row contains an edit button and a checked checkbox, indicating that the employee can fulfill all service requests by default. The rest of the table structure is identical to the previous screenshot, listing various Star Wars and Harry Potter characters as employees.

Employee ID	First Name	Last Name	Email	Services	Active
0	staff	staff		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
99999	Karen	Caren		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
31415	Elie	Hess	elienhess@gmail.com	<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100000	Harry	Potter		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100001	Hermione	Granger		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100002	Ron	Weasley		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100003	Severus	Snape		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100004	Albus	Dumbledore		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100005	Neville	Longbottom		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100006	Tom	Riddle		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100007	Luke	Skywalker		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100008	Obi-Wan	Kenobi		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100009	Han	Solo		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100010	Leia	Organa		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100011	Anakin	Skywalker		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100012	Sheev	Palpatine		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100013	Bilbo	Baggins		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100014	Frodo	Baggins		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100015	Samwise	Gamgee		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100016	Gandalf	the Grey		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100017	Aragorn	son of Arathorn		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>
100018	Tony	Stark		<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>



2.5.4 View Service Request Statistics

Statistics of service request, such as time of service needed and types of service, can be viewed on this page to help the admin make executive decisions.



2.5.5 Edit Kiosk settings

There are two kiosk settings that the admin can change, they are located on the main Administrative page at the bottom right corner under the other functionalities:

1. Change the timeout time period: the kiosk application will time out after an admin determined time (see 2.1.6 for more details on the time out session). The default timeout is 30 seconds, and the admin can change to any duration greater than 1 second.
2. Change the path finding algorithm: multiple path finding algorithms were written for this application for educational purposes. The default A* algorithm is the most efficient and optimal path, and it is highly recommended. The admin has the power to change it to Breath-First Search (BFS), Depth-First Search (DFS), Best-First Search, and Dijkstra.



2.6 Book Room

Employees and admins can book rooms and desks in the Flexible Workspace on the fourth floor. The main page shows the current availability of all the bookable space. Red means occupied, and green means available. To view the availability of room at a given time for booking, the user can change the time period on the upper right corner.

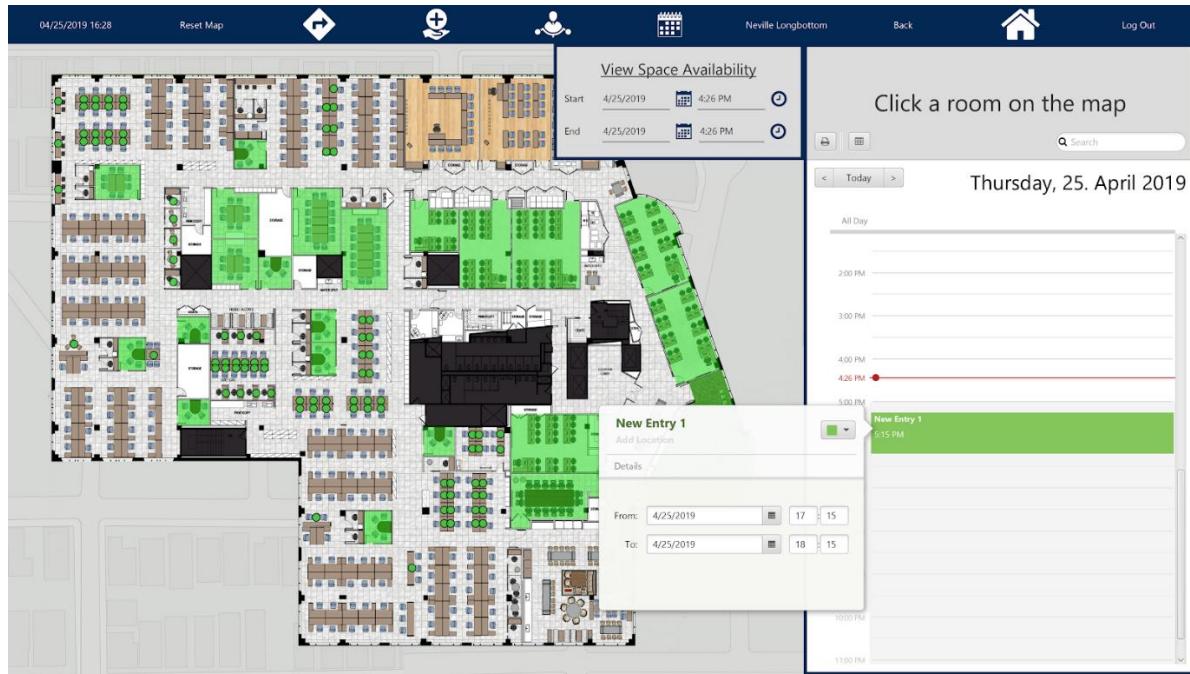


To book a space, the user will select the room or desk on the map by clicking inside the colored area. The area will show selection with a blue border. The calendar on the right side will show the space's name and availability in a user-friendly calendar view. The user can



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double click to add a booking directly on the calendar.



The user can change the name and time of the event by clicking on the booking. They can also drag the booking on the calendar or change the size of it. Availability map will automatically update as the user adds a booking when the correct time frame is been displayed. Conflicting bookings are prevented by the system to ensure no double booking. Note the desks can only be booked 15 minutes in advance, and bookings beyond that range will automatically be reset to start at current time.

Like the calendar in the user profile page, this calendar can show week and month views, as well as print to local copy (see 2.3.1 bullet 3 for more details).

The bookings made by the user will appear in the user's profile page calendar (see 2.3.1 bullet 3 for more details).



2.7 Fun Corner

A nonage restricted fun corner was developed to help the user destress. The button is location on the bottom left of the home screen.



2.7.1 Snake

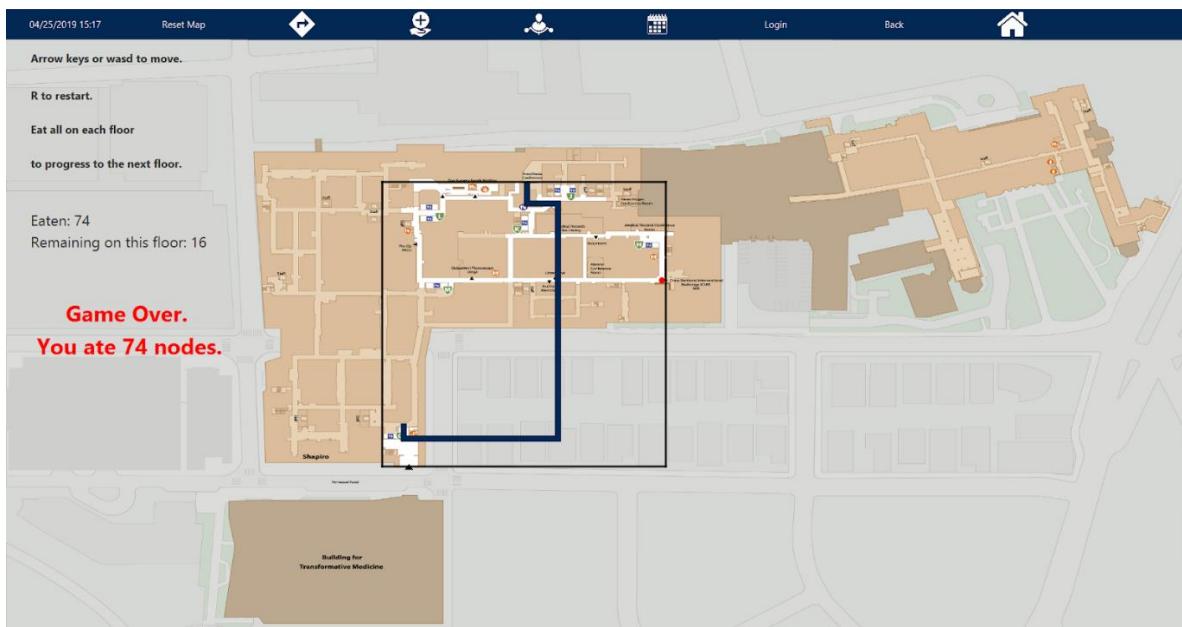
A snake game was developed using the maps of the hospital and location nodes.

The user can press the arrow keys or the WASD keys to start and play. Press R will restart the game. The game will be over if the snake runs into the edge or itself. The snake starts on lower floor 2. Eating all nodes on a floor will let the snake enter the floor above until the fourth floor is reached and all nodes are eaten.

On the left-hand side, game rules are displayed. The cumulative score will show and update as the snake eats more nodes. It will also let the user know how many nodes are left on the current floor. If the game is over, the application will show the final score and “Game Over” in red.



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If the user beats all the levels, they beat the game and will be congratulated.