

User Manual

CS3733-D19-D01 Iteration 4

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Welcome

The first page the user sees is the splash screen of the kiosk. It contains an image of the Brigham and Women's hospital logo. On the top of this page, the user can see a green train icon with the time to departure of upcoming trains next to it. This schedule is for the Green Line, which is located near Brigham and Women's Hospital. On the other side of the page top the user can see the current weather in the area surrounding the Brigham and Women's Hospital. This weather display includes the current temperature and the daily high temperature. Additionally, we display current medical headlines as a scrolling text field at the bottom of the application.

When the user begins to interact with the kiosk, the default page is replaced with the welcome page.

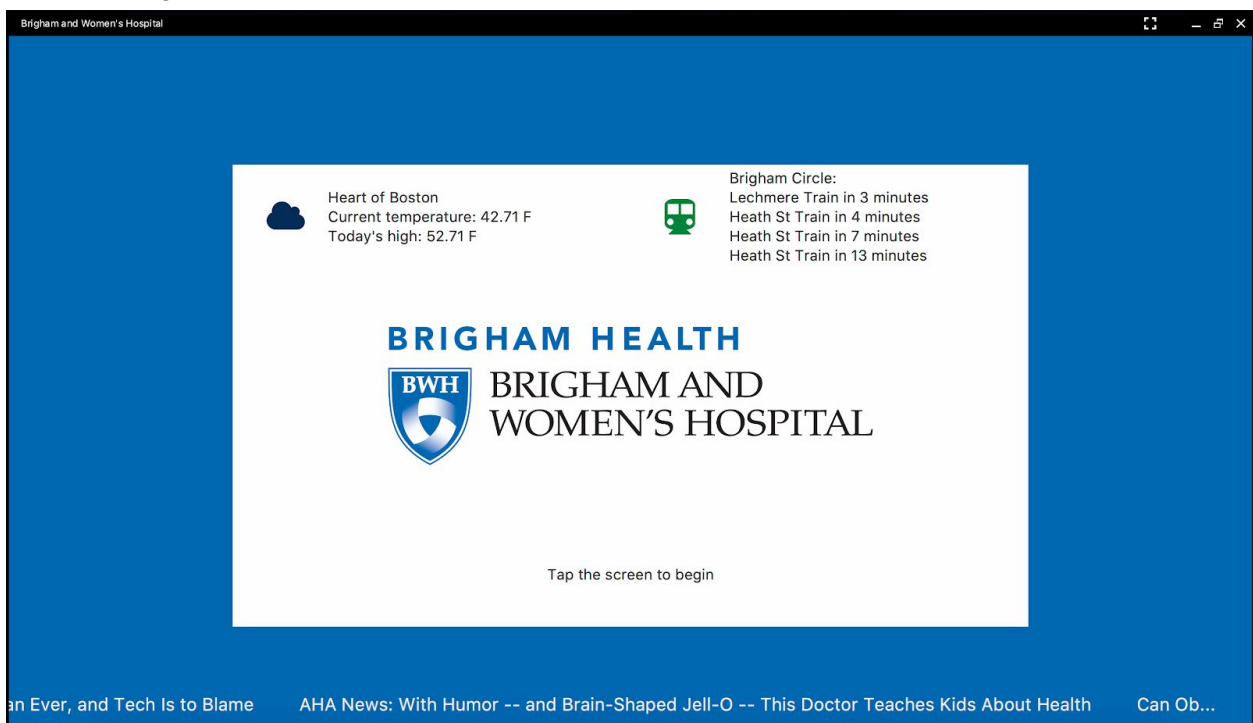


Figure: Splash Screen

The user has two options upon reaching the welcome screen. They can access the Emergency feature without presenting any credentials, otherwise they must log into the application. The credentials are given specific permissions, and are tied to specific employees. For development purposes, the credentials of username "staff" and password "staff" correspond to an employee with full permissions. Credentials are stored in a salted hash form in our database in order to keep the passwords secure. Once the user enters correct credentials and selects the "Login" button, the user is taken to a page which asks the user to authenticate the login.



Figure: Welcome Screen

In order to proceed, the user must select the “Get 2FA Key” button. When this button is pressed, it texts the employee a randomly generated key to use. For development purposes, the key will also be printed on the command line. The user then presses the submit and is directed to the main page of the app. If the user selects the home button in any page of the application, it will also direct them to the main page.

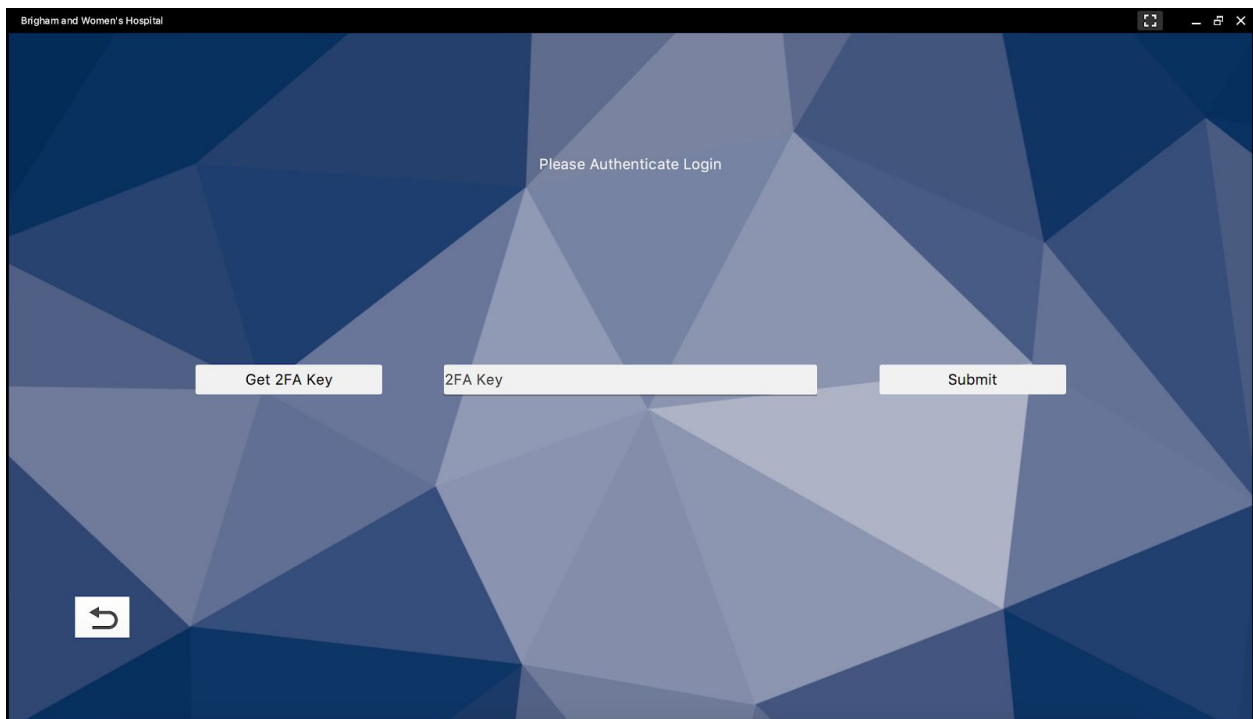


Figure: Multi-Factor Authentication

Main Page

The main page of the application is the default user screen. The user will be directed here if they select the home button or spend too much time (30 seconds) inactive on any given page while logged in. The map is the central feature of the page. It is possible for the user to zoom and pan on the map, as well as view different floors by pressing the numbered buttons on the right side of the screen. The page also contains buttons a menu bar with buttons to the different features of the application including an About page and the ability to sign out, and the user can also choose to press the Relax button on the bottom right of the page to access the Relax feature.



Figure: Main Page

Map Building

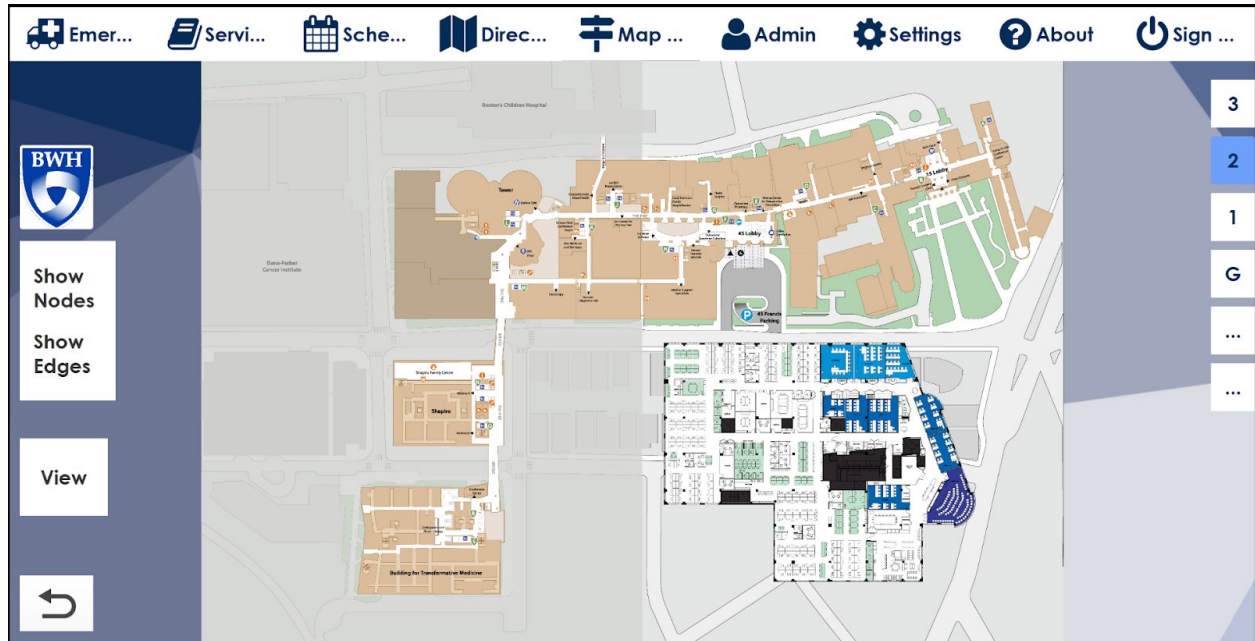


Figure 4: Map Building Screen

The user can access the map building features by selecting the map builder top-bar button while in account with admin access. The following display looks very similar to the home screen with the addition of three buttons on the left side. The first button will be “Show Nodes” the second “Show Edges” the third will be to select the mode. Clicking show nodes will display all of the nodes in the database on the currently selected floor. The button will then say Hide Nodes. Clicking Show Edges will display all of the edges in the database on the selected floor, then the button will display hide edges. To hide either nodes or edges, click the respective buttons again. Finally, the third button toggles the actions that the map can perform. The label of the button represents the current mode. In viewing mode, the user can only zoom and pan on the map. In Add mode, the user can left click the map to make a node. The user can click a node to display its information, and edit it. Dragging a node can change the coordinates of a node on the respective floor. When a node is selected, another can be clicked and an edge will be generated between them. In delete mode, the user can click a node to delete it and all of the connected edges, and can click an edge to delete an edge.

Path Finding

The user can access the path finding features by selecting the “Directions” icon from the top menu bar on the home page. The user will then see a Directions menu appear on the left-hand side of the main menu screen. The user is then prompted to select start and end locations from drop-down menus. Under the header “Select Start Location”, the user selects the type of location they wish to navigate to from the “Directories” dropdown. They may choose from a list including Current Location, Conference Rooms, Departments, Elevators, Exits, Information, Labs, Restrooms, Retail, Services, Stairs, and Flexible Workspaces. When the user selects the location type, they are then prompted to select a specific location from the Options drop down that includes all the nodes of that type. The user then repeats this process to select a destination under the “Select End Location” header. Once the user has selected their start and end locations, they click the “Submit” button.



Figure: Start Location and End Location Selection View

The user will then be directed to pathfinding mode. The home screen map will automatically change to display whichever floor the selected starting location is on. The shortest path to the user’s destination is then displayed on the home screen map in the form of a black line with black circles along the line that represent the nodes for the user to traverse. The starting location is displayed as a blue circle. There is a stick figure man that travels along the path that the user has selected in the direction they must walk in. On the left-hand side of the screen, the user will see a text box complete with text directions to guide them to their location. The text directions begin by reinstating the start and end locations that the user wishes to see the path between. The user will also see an estimation in minutes of how long it will take them to walk from their starting location to their destination.

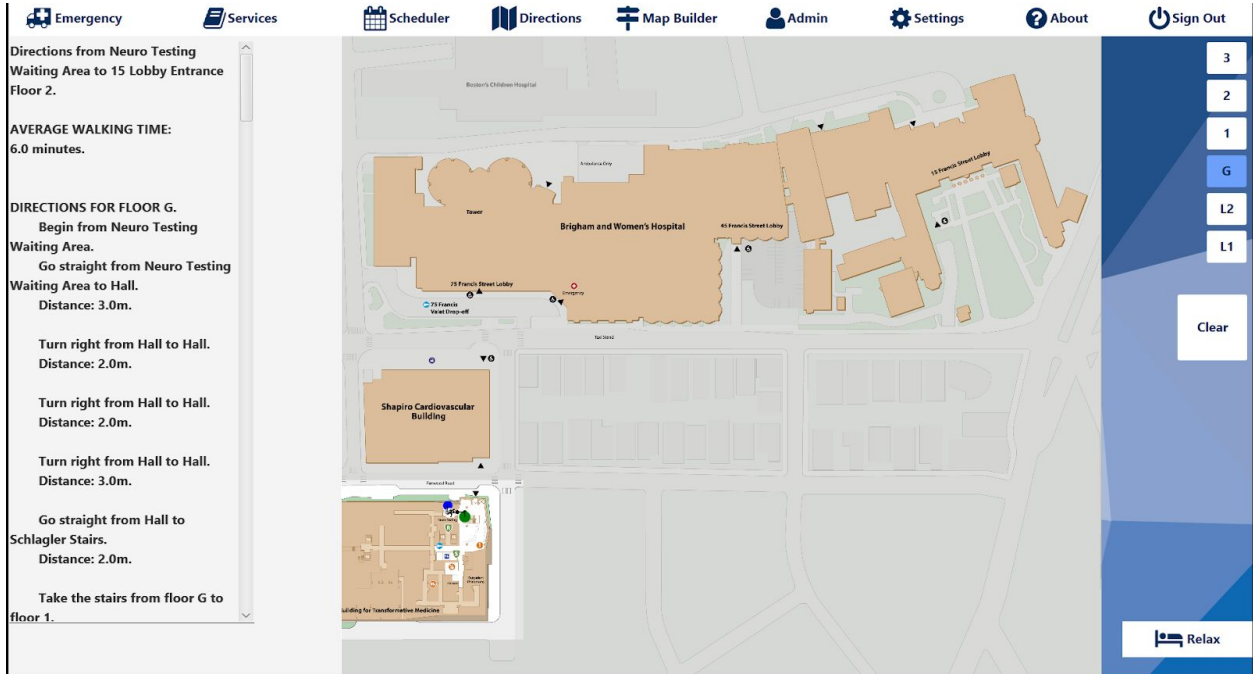


Figure: Pathfinding Screen

If the path that the user has selected requires them to change floors, the user will first be directed from their starting location to an elevator or flight of stairs to utilize. The stair or elevator node will be displayed as a green circle. If the user clicks on this node, the home screen map will change to display the next floor that the user will need to travel to.

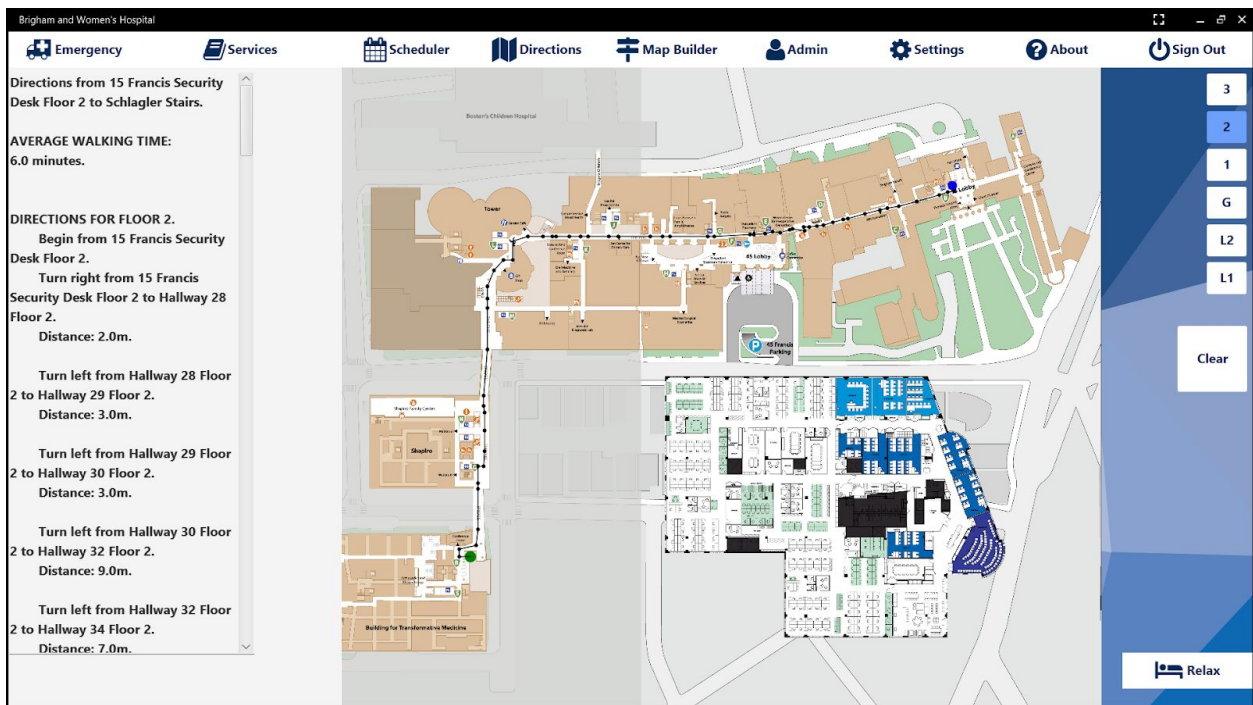


Figure: Multi-Floor Pathfinding Display

Scheduling

To reach the schedule features, the user must select the “Scheduler” icon in the top menu bar on the home page. The user is then moved to the Scheduled Room View, which displays a map of the rooms. The flexible workstations, which are shown in general on the left side of the image, are randomly marked occupied (red) or unoccupied (green). The classrooms, the auditorium, and the conference room are highlighted with the same colors according to their occupancy in their database, which can be altered by the user in the form of making a booking.

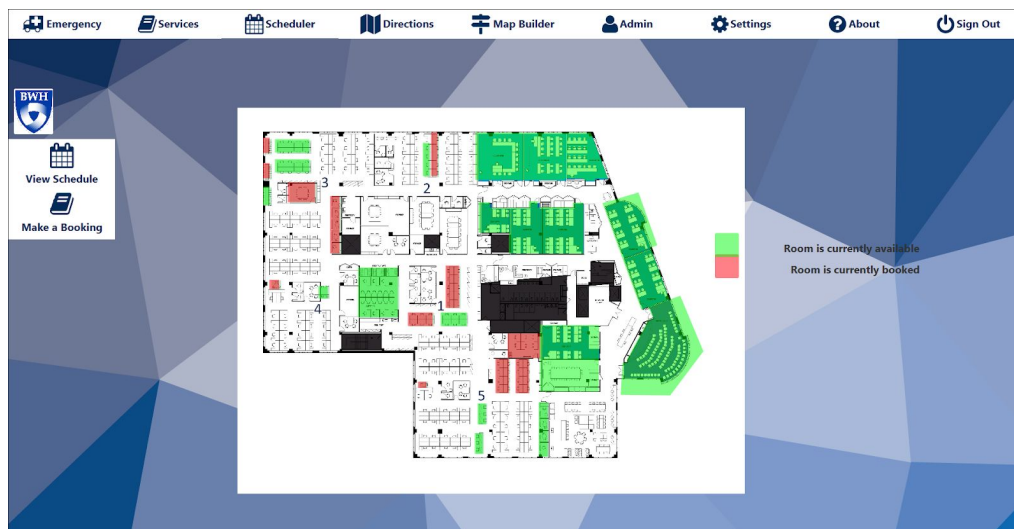


Figure: Scheduled Room View

To make a booking, the user can click the “Make a Booking” button on the left side of the screen. From there, they are directed to the Booking page. This page then takes information about the potential booking. The user is asked to pick a start date, and, if applicable, an end date. If the user does not specify an end date the field will autofill to the same date as the start of the booking. The user then provides a start time and an end time for their booking. They are also asked to provide a name to reserve the room, and must select the room they wish to reserve from the a list of reservable rooms. To make the booking, the user then must press submit. The booking page will warn the user if the booking was not made for reasons including if required fields on the Booking page were not completed, if the start date occurs before the end date, if the start time occurs before the end time when the booking does not span multiple days, or if the room is already scheduled for part or all of the chosen time.

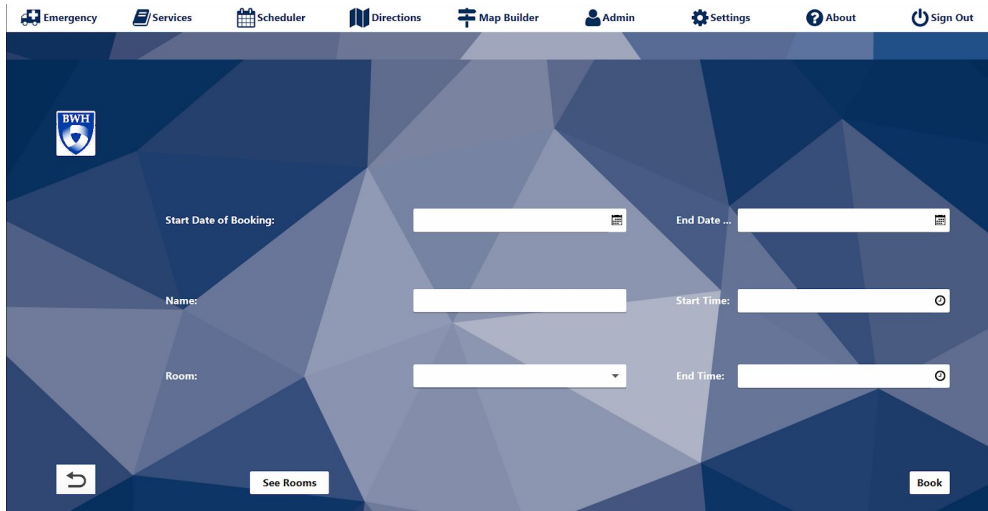


Figure: Booking Screen

The user is also able to see the room schedule. To do this, the user must press the “View Schedule” button on the Scheduled Room View page. From there, they are directed to the Schedule page. On this page, they are shown a calendar which displays the current week with bookings colored by the room. The user can see the bookings for a specific room by selecting a room to filter by and selecting a time frame (week or day) to view. The user is also able to see weeks in the past or future by selecting the next or previous buttons above the calendar view.

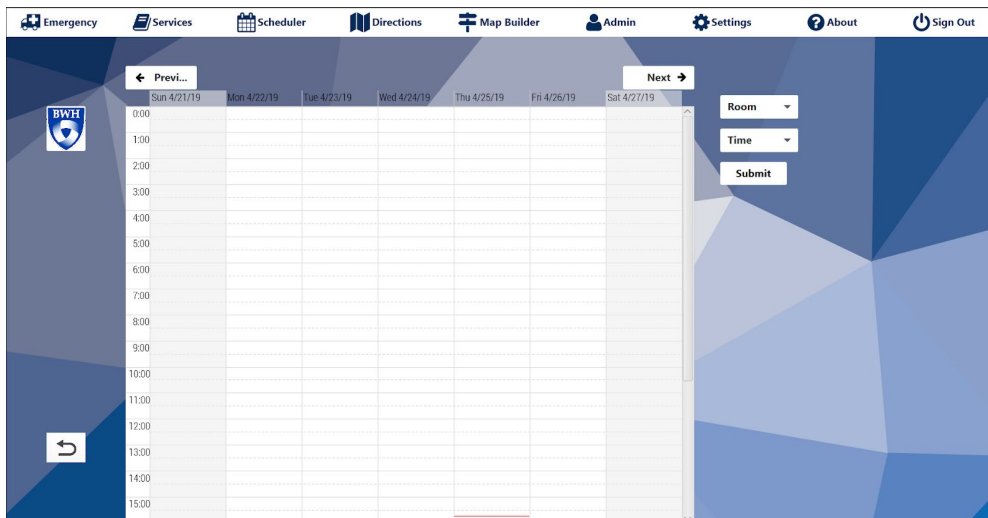


Figure: Schedule Screen

Service Requests

The user can access the request for service features by pressing the “Service Request” button on the top menu bar on the main page. The user selects an option from the menu and presses the enter button. This action will take the user to a page tailored to the specific service request.

All service requests are forms which request information from users, and then, once the request is made, the information is sent to a database viewable in the Administrator view. Requests in that database can be marked resolved by employees with the appropriate permissions.



The screenshot displays the 'Service Request Page' interface. At the top, a navigation bar contains several menu items: 'Emergency' (with a medical cross icon), 'Services' (with a document icon), 'Scheduler' (with a calendar icon), 'Directions' (with a map icon), 'Map Builder' (with a location pin icon), 'Admin' (with a person icon), 'Settings' (with a gear icon), 'About' (with a question mark icon), and 'Sign Out' (with a power icon). Below the navigation bar is a dark blue header area featuring the BWH logo on the left. The main content area has a background of overlapping blue geometric shapes. In the center, there is a white input field labeled 'Service Request Type:' with a dropdown arrow on the right. At the bottom left, there is a white button with a circular arrow icon, and at the bottom right, there is a white button labeled 'Submit'.

Figure: Service Request Page

IT Request

The IT request page requires a name and a description of the problem in order to make the request. It is accessed by selecting IT request in the requests dropdown menu.

To use this service request, the user should enter the name of the person making the request into the name field, and the details of the request in the description, such as what has broken, or what software needs updating. Once done, the user clicks the submit button, which submits their request and returns them to the home screen.

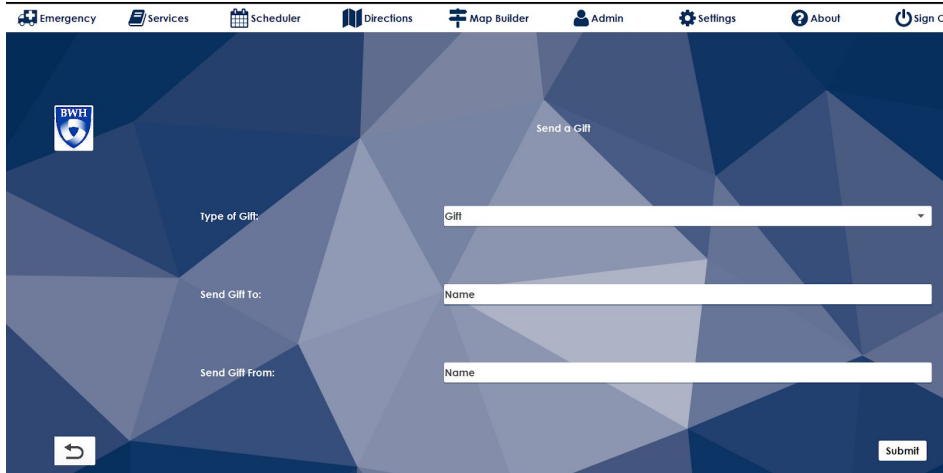


The screenshot shows the IT Request page within the Bishopfish 12 application. The top navigation bar includes links for Emergency, Services, Scheduler, Directions, Map Builder, Admin, Settings, About, and Sign Out. The main content area features the BWVH logo on the left and the text "IT Request" in the center. Below this, there are two input fields: "Name:" and "Description:". A "Submit" button is located at the bottom right of the form area. A back arrow icon is visible in the bottom left corner of the page.

Figure: IT Request Page

Gift Request

The Gift Request requires the user to select a type of gift from a list, specify a recipient, and specify a sender. It is accessed from the service requests dropdown, by selecting gift request. To create a gift request, a user must select a type of gift from the dropdown menu, and input the name of the sender and recipient in their respective fields. Once the user hits the submit button, the request is submitted and the user is returned to the home screen.

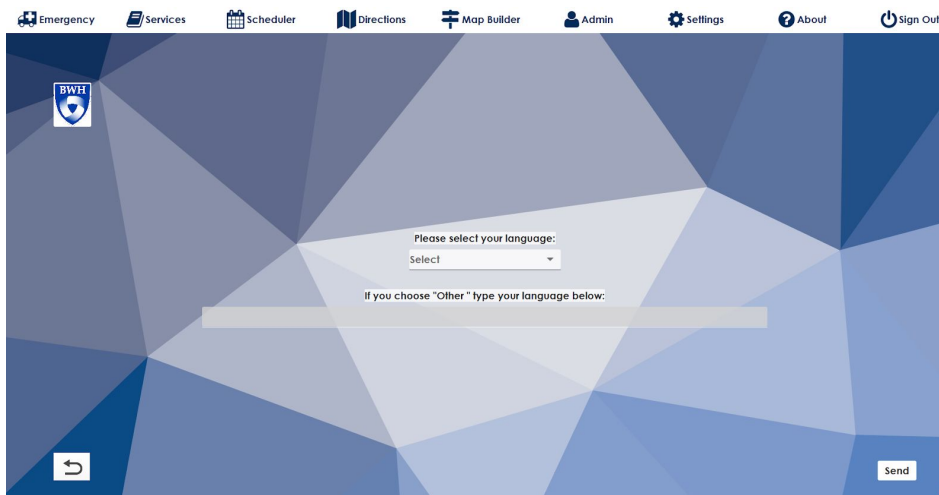


The screenshot shows the 'Send a Gift' form within the Bishopfish application. The form is set against a dark blue background with a geometric pattern. At the top, a navigation bar includes icons for Emergency, Services, Scheduler, Directions, Map Builder, Admin, Settings, About, and Sign Out. The form itself features a BWH logo in the top left corner. The main content area contains three input fields: a dropdown menu labeled 'Type of Gift' with 'Gift' selected, a text input field labeled 'Send Gift To:' with 'Name' entered, and another text input field labeled 'Send Gift From:' with 'Name' entered. A 'Submit' button is located at the bottom right, and a back arrow icon is at the bottom left.

Figure: Gift Request Page

Interpreter Request

The Interpreter Request requires the user to select one of the top 10 most common languages spoken in the U.S. and American Sign Language. The user can also select “Other” and specify a language not listed. This request is accessed from the service requests dropdown menu. Once it is selected, the user should either select one of the 10 most common languages, or the “Other” option. If the other option is selected, the user must fill in the field below the button with the language an interpreter is required for.



The screenshot shows the 'Interpreter Request' page within the Bishopfish system. The page has a dark blue background with a geometric pattern. At the top, there is a navigation bar with icons and labels for 'Emergency', 'Services', 'Scheduler', 'Directions', 'Map Builder', 'Admin', 'Settings', 'About', and 'Sign Out'. The BWH logo is in the top left corner. The main content area contains a form with the following elements:

- A heading: "Please select your language:"
- A dropdown menu with the text "Select" and a downward arrow.
- A text prompt: "If you choose 'Other' type your language below:"
- A light gray text input field.
- A "Send" button in the bottom right corner.
- A back arrow icon in the bottom left corner.

Figure: Interpreter Request Page

Consult Request

The Consult Request page requires the user to specify a name, a specialty required for the consult, a doctor, and a description of the consult. This request is accessed by selecting the consult request option from the requests dropdown. Once it is selected, the user should enter their name, select the specialty of the doctor they wish to schedule a consult with, choose a doctor from that department using the department dropdown, and then fill in the details of why they are making the request. They should then press the submit button, which will return them to the home screen and send their request to be fulfilled.

The screenshot shows the 'Consult Request' page. At the top, a navigation bar includes icons and labels for: Emergency, Services, Scheduler, Directions, Map Builder, Admin, Settings, About, and Sign Out. The main content area has a dark blue background with a geometric pattern. On the left side, there is a vertical list of labels: Name, Specialty, Doctor, and Details. To the right of these labels are the corresponding form fields: a text input for Name, a dropdown menu for Specialty (showing 'Select...'), a dropdown menu for Doctor (showing 'Choose a Specialty First'), and a text area for Details. At the bottom left, there is a back arrow icon, and at the bottom right, there is a 'Submit' button. The BWI logo is located in the top left corner of the form area.

Figure: Consult Request Page

Religious Request

The Religious Request requires the user to select the type of service from a list, provide any necessary details, specify the requesting staff, and specify the religion associated with the request. This service is accessed by selecting the religious request option on the requests dropdown. The user should then select what service they need, or fill in the other field if none of the dropdown fields apply, fill in their name, and select the religion or faith of the religious leader that is desired for the service.



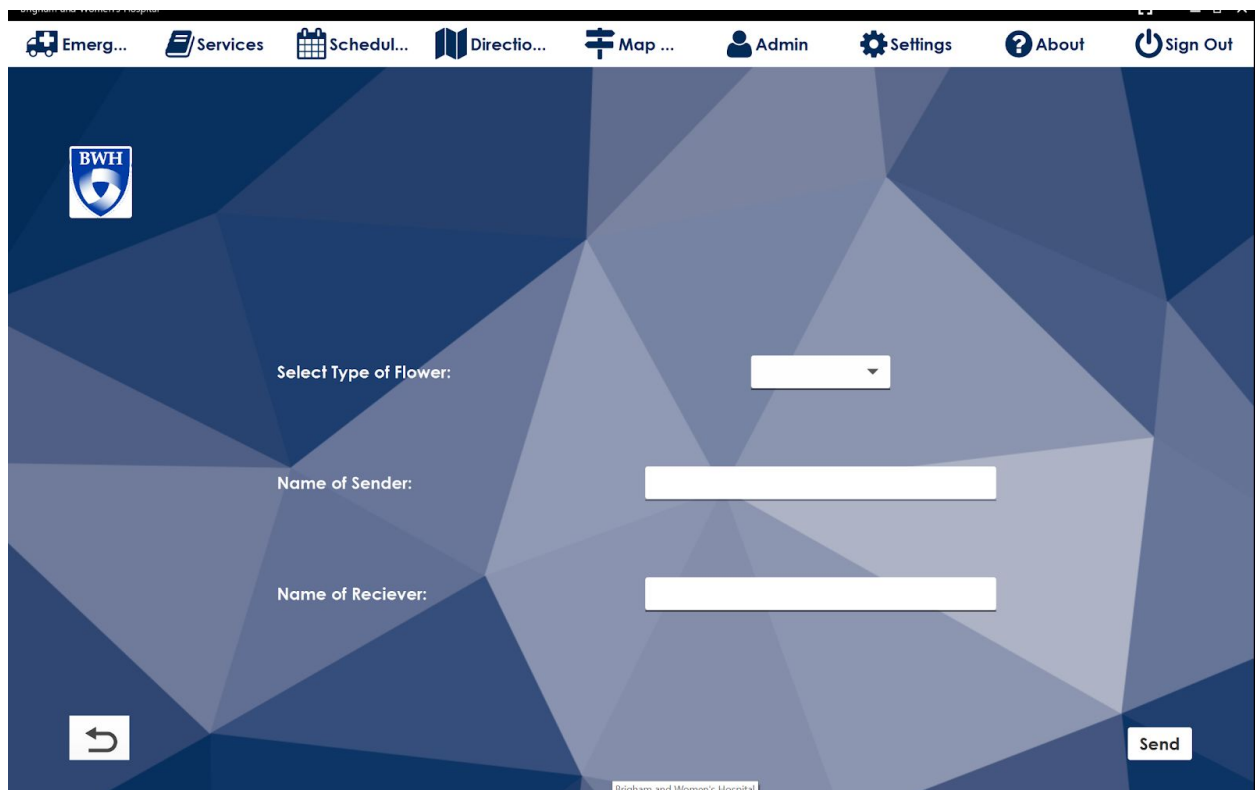
The screenshot displays the 'Religious Request' form within the Bishopfish application. At the top, a navigation bar includes icons and labels for 'Emergency', 'Services', 'Scheduler', 'Directions', 'Map Builder', 'Admin', 'Settings', 'About', and 'Sign Out'. The main content area features a dark blue background with a geometric pattern. On the left, the BWH logo is visible. The form consists of four input fields: 'Service:' (a dropdown menu), 'If Other:' (a text input field), 'Requesting Staff:' (a text input field), and 'Religion/Faith:' (a text input field). A 'Submit' button is located at the bottom right, and a back arrow icon is at the bottom left. An 'Emergency' checkbox is present in the top right corner of the form area.

Figure: Religious Request Page

Florist Request

After selecting the Florist Request from the dropdown menu and pressing submit the application displays the florist request page. The first field is a drop down menu of 7 options of flowers from which the user can select from. After selecting the type of flower the user can input his name on the name of the sender field and then enter the name of the receiver and click submit. After clicking submit the user would be sent back to the home screen and the request would be complete.

If any field is missing the request won't go through and a red text will appear under incomplete required fields.



The screenshot shows the 'Florist Request' page within the Bishopfish application. At the top, there is a navigation bar with icons and labels for 'Emerg...', 'Services', 'Schedul...', 'Directio...', 'Map ...', 'Admin', 'Settings', 'About', and 'Sign Out'. Below the navigation bar is the Brigham and Women's Hospital (BWH) logo. The main content area features a dark blue background with a geometric pattern. It contains three input fields: a dropdown menu labeled 'Select Type of Flower:', a text input field labeled 'Name of Sender:', and another text input field labeled 'Name of Reciever:'. A 'Send' button is located at the bottom right, and a back arrow icon is at the bottom left. The text 'Brigham and Women's Hospital' is visible at the bottom center of the page.

Figure: Florist Request Page

Pet Therapy Request

After selecting the Pet Therapy Request from the dropdown menu and pressing submit the application displays the pet therapy request page. The first indicated field is a drop down menu where the user can select one of the species available at the hospital. Then the user can input the name of the patient that requested the therapy and then input the date and time and click submit. After clicking submit the user would be taken back to the home screen and the request would be submitted.

If any field is missing the request won't go through and a red text will appear under incomplete required fields.



The screenshot shows a web browser window displaying the Pet Therapy Request page. The browser's address bar shows "bingham and women's hospital". The navigation bar includes links for "Emerg...", "Services", "Schedul...", "Directio...", "Map ...", "Admin", "Settings", "About", and "Sign Out". The main content area features the BWH logo in the top left. The form consists of the following fields:

- "Select species:" with a dropdown menu.
- "Patient:" with a text input field.
- "Date:" with a date picker.
- "Time:" with a time picker.

At the bottom left, there is a back arrow icon. At the bottom right, there is a "Request" button.

Figure: Pet Therapy Request Page

Reading Request

After selecting the Reading Request from the dropdown menu and pressing submit the application displays the reading request page. The first indicated field is a drop down menu where the user can select one of the books available at the hospital. Then the user can input the room number of the patient that requested the book and then input the date and time and click submit. After clicking submit the user would be taken back to the home screen and the request would be submitted.

If any field is missing the request won't go through and a red text will appear under incomplete required fields.

The screenshot shows the 'Reading Request' page in the Bishopfish 19 application. The page has a dark blue background with a geometric pattern. At the top, there is a navigation bar with icons for Emergency, Services, Scheduling, Directions, Map, Admin, Settings, About, and Sign Out. The main content area includes the BWH logo, a 'Select Book:' dropdown menu, 'Patient Room:', 'Date:', and 'Time:' input fields, a back arrow icon, and a 'Request' button.

Figure: Reading Request Page

Accommodation Request

After selecting the Accommodation Request from the dropdown menu and pressing submit the application displays the reading request page. The first indicated field is a drop down menu where the user can select one of the accommodations available at the hospital. Then the user can input the room number of the patient that requested the accommodation and then input the referring doctor's name and click submit. After clicking submit the user would be taken back to the home screen and the request would be submitted.

If any field is missing the request won't go through and a red text will appear under incomplete required fields.

The screenshot shows the 'Accommodation Request' page. At the top, there is a navigation bar with icons for 'Emerg...', 'Services', 'Schedul...', 'Directio...', 'Map ...', 'Admin', 'Settings', 'About', and 'Sign Out'. Below the navigation bar is a dark blue header with the BWH logo on the left. The main content area is a light blue rectangle containing a form. The form has three input fields: a dropdown menu labeled 'Accommodation', a text input field labeled 'Room Number:', and another text input field labeled 'Referring Doctor:'. In the bottom left corner of the form area, there is a white square button with a back arrow icon. In the bottom right corner, there is a white rectangular button labeled 'Send'.

Figure: Accommodation Request Page

Emergency Request

The user can access the emergency request by pressing the “Service Request” button on the top menu bar on the main page. The application then displays a screen with 6 buttons each of them representing one of the color coded emergencies used by Hospitals. By pressing any of the buttons the user submits an emergency code and at the same time the software takes a picture of the user. The user can also select the back button or home button to go back to the home page.



Figure: Emergency Request Page

Administrator View

The user can access the Administrator View by pressing the “Admin View” button on the top menu bar on the main page. The user is then taken to the Admin landing page where he can choose from any of the three buttons: “Database Viewer”, “Edit Map Nodes” and “Add Employees”. Clicking on any of the three buttons will take the user to the selected page, the user may also select the back button or the home button which would both return the user to the home page.

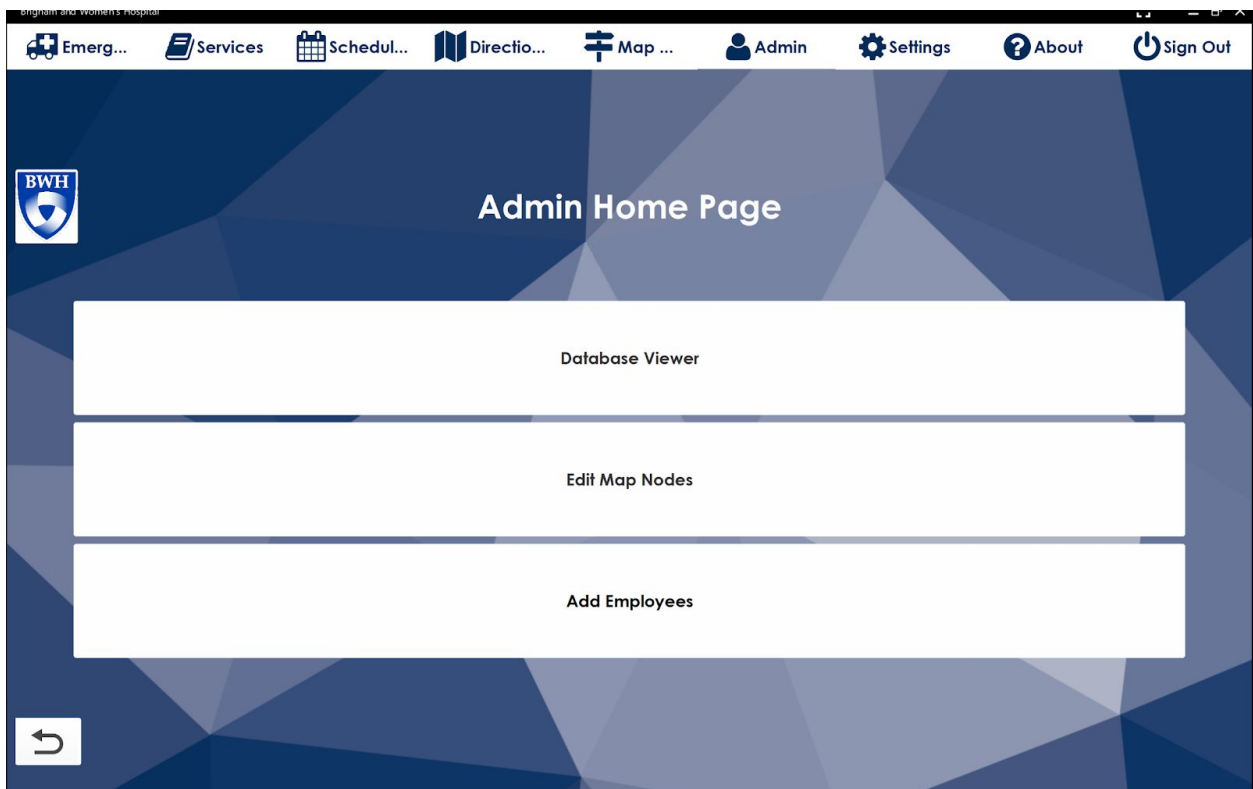


Figure: Administrator View

Database Viewer

After clicking the Database Viewer button and getting to the database screen the user is presented with a drop down menu that controls the table below it. When the user selects any of the fields within the drop down menu the software displays its database on the table. After seeing any database the user desires the user can use the back button to go back to the admin landing page or the home button to go back to the home page.

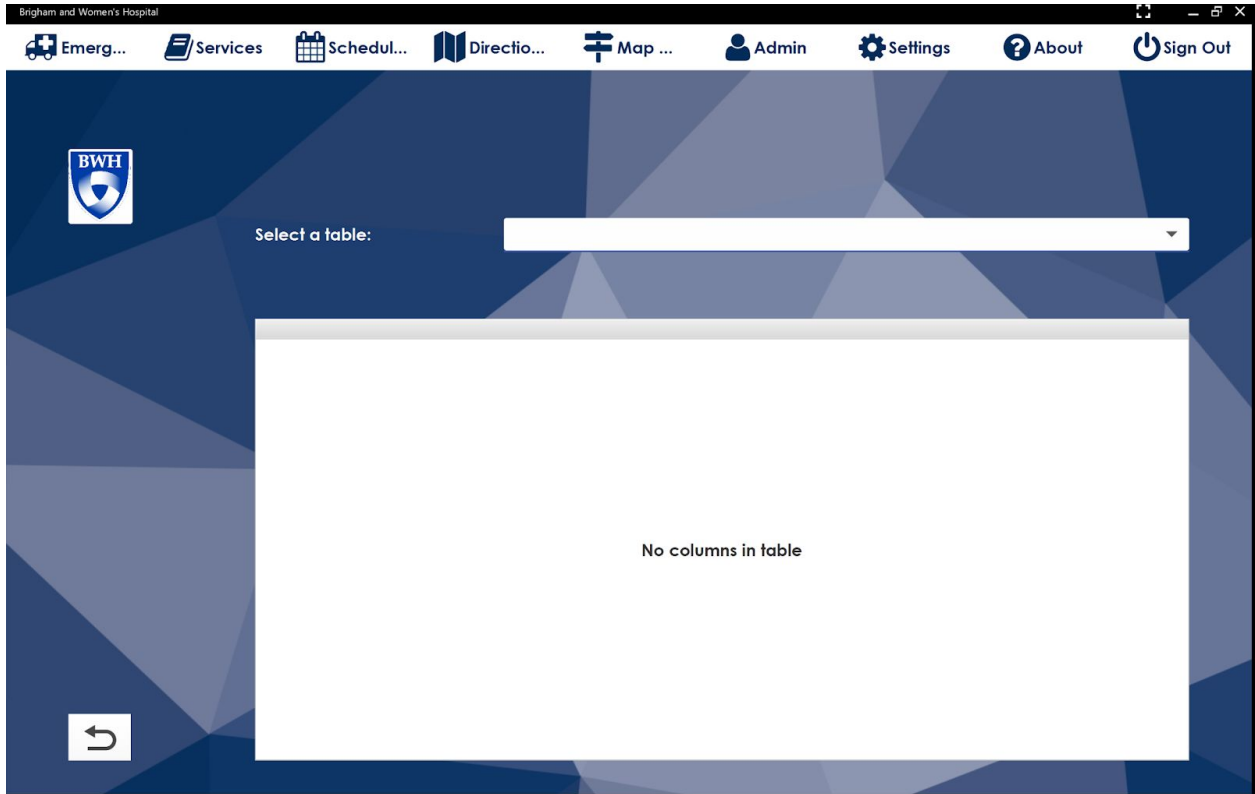


Figure: Database View, before a table is selected

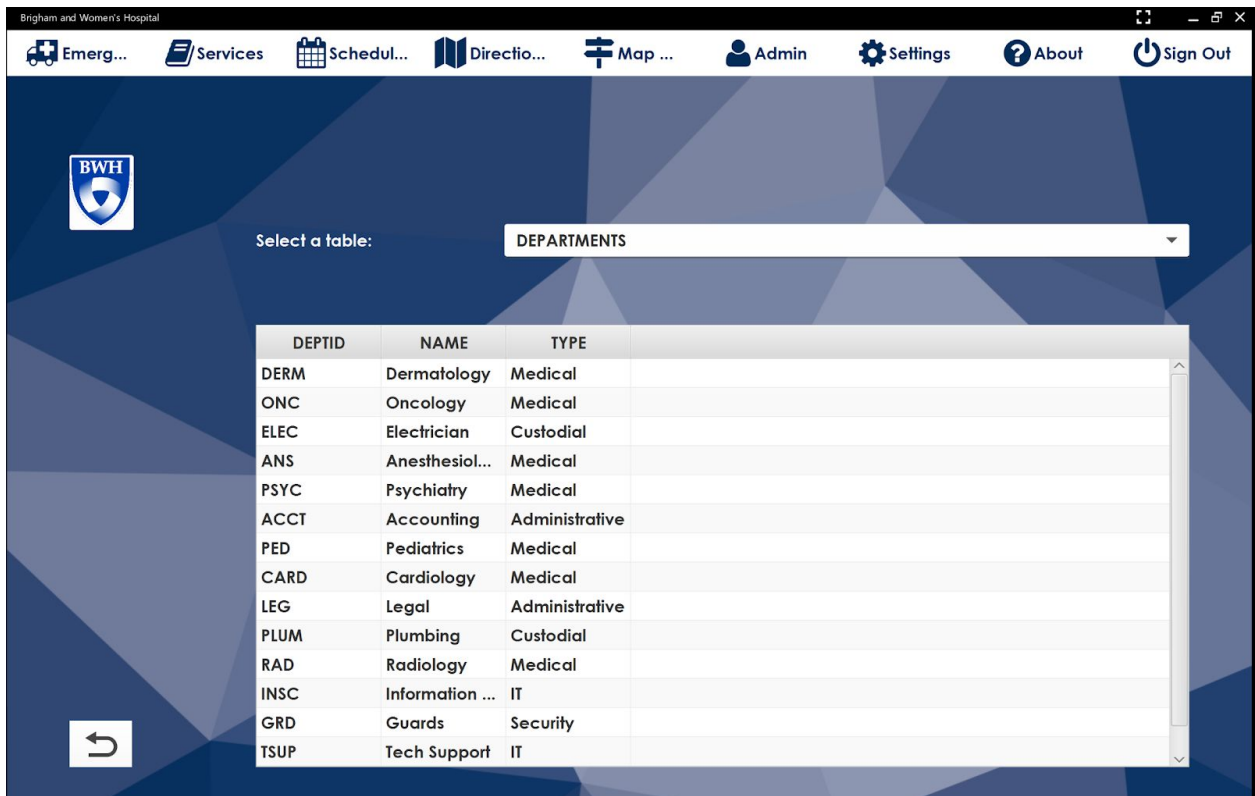


Figure: Database View, after a table is selected

Edit Map Nodes

After clicking the Edit Map Nodes button and getting to the Map Builder screen the user is presented with 5 buttons that offer the user to: add or remove a node or an edge and also to edit a Node. Each button takes you to its respective page where the action described in the button can be done.

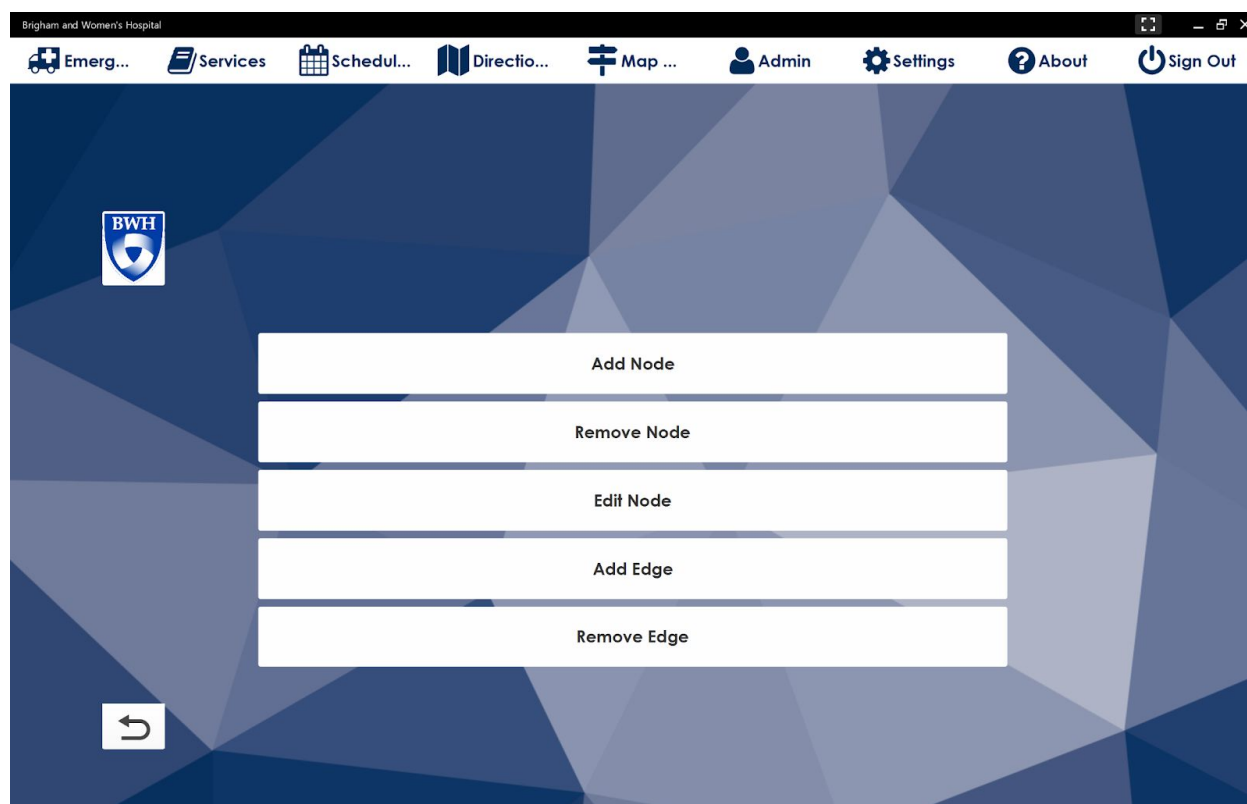


Figure: Map Node Editing Page

Special Features

Breathing Exercises

To use the breathing exercises and guided meditation, the user should simply press the “relax” button in the lower right corner of the home screen. The audio will then begin playing. To stop the audio, the user should press the same button, which will have changed its name to “Stop”, or simply navigate to a different page of the application.



Figure: Main Page, with the Relax button in the bottom right

News Feed

The news feed is configured to connect to an external RSS feed and get real-time medical news headlines. There is no way for the user to change this feed path without editing the code.

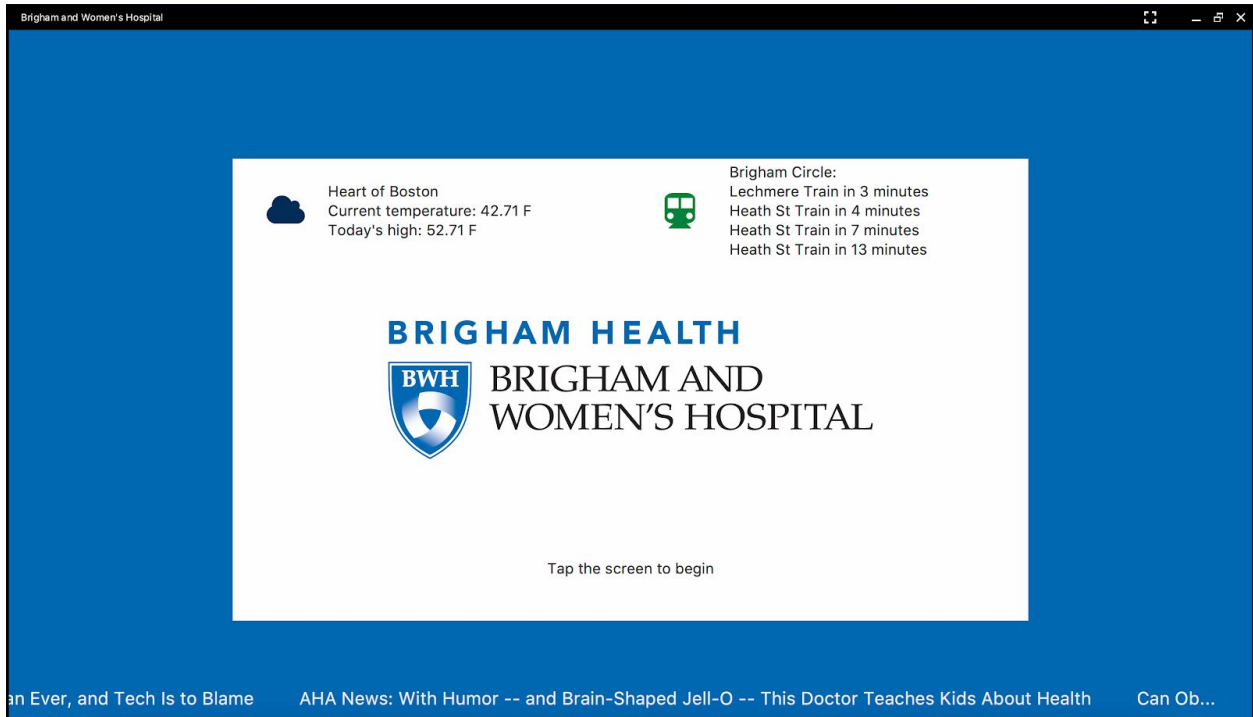


Figure: Splash Screen, where the News Feed is visible on the bottom

Train Schedule

The train schedule is configured to show the current Brigham Circle Green line train schedule and displays a time of arrival prediction for the train which is updated in real-time. There is no way for the user to change this within the application.

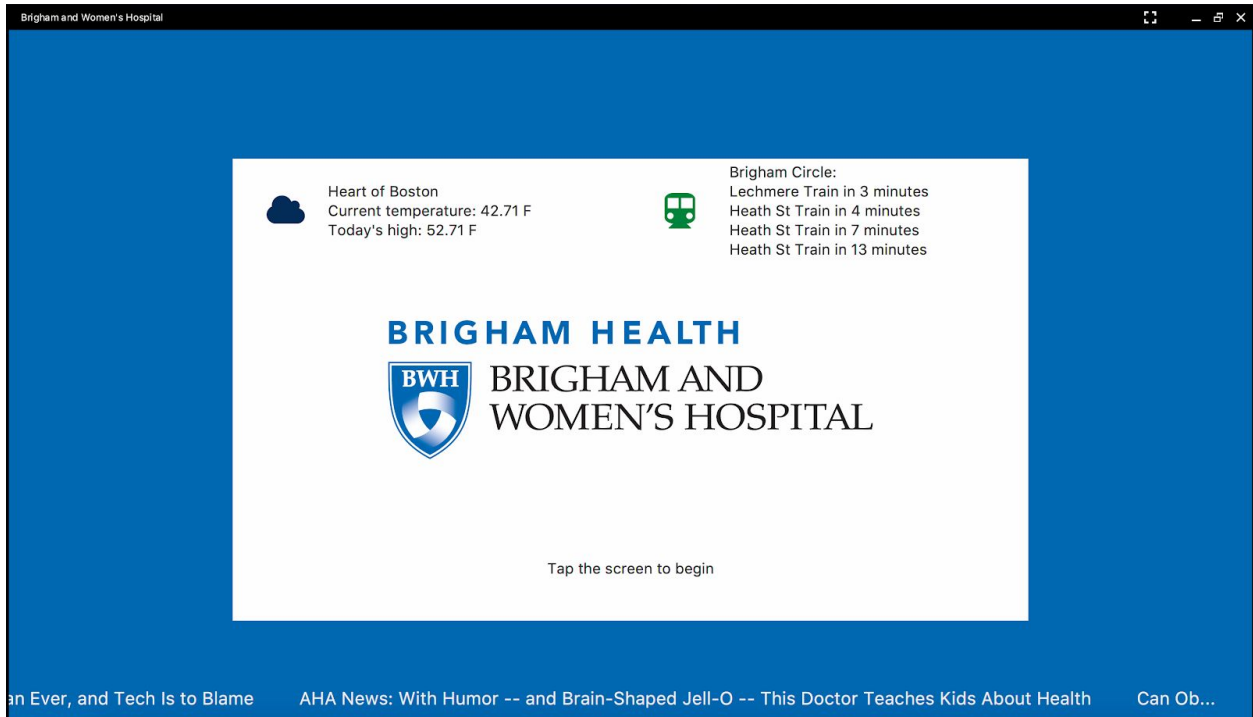


Figure: Splash Screen, where the Train Schedule is visible at the top right

Weather

The user can see the current temperature and daily high temperature for the hospital area on the splash screen.

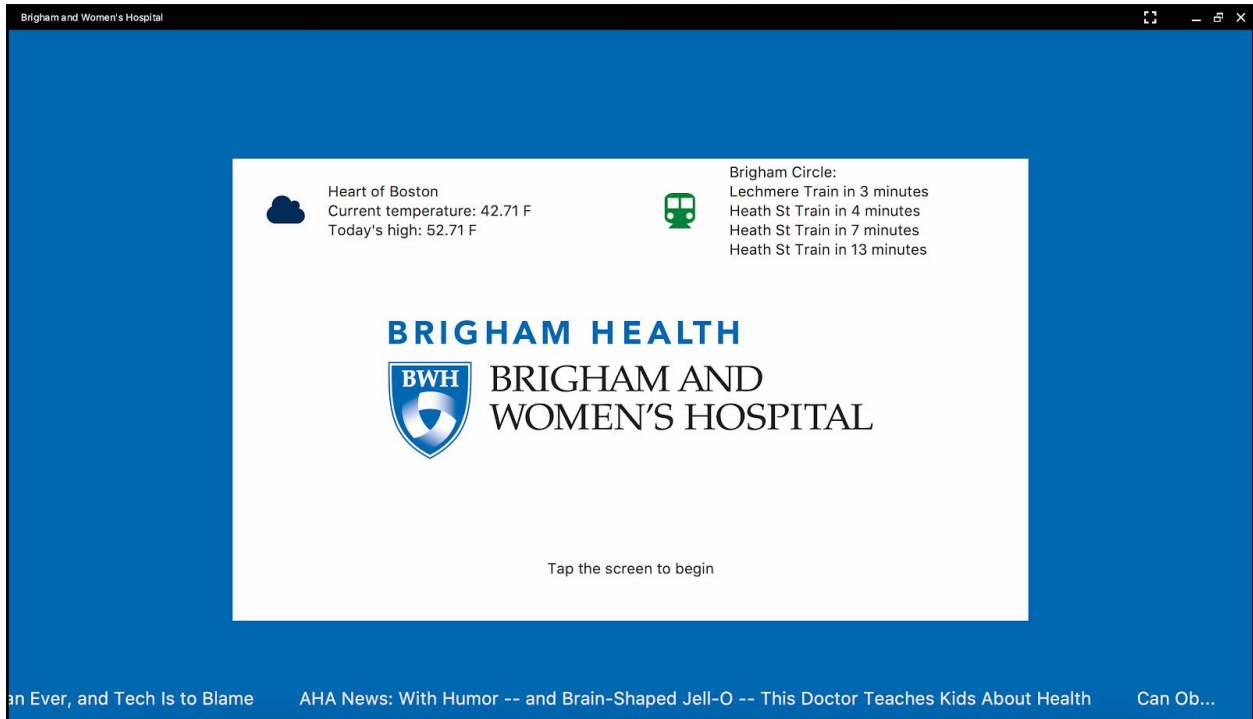


Figure: Splash Screen, where the Weather feature is visible at the top left

Texting and Email

The user receives texts containing their authentication key via Twilio. The user can then use the code in this text to authenticate their identity.

The user can send form-filled emails using several of the service requests. These emails are sent to a predetermined address which the user cannot change, and varies depending on the type of request being made.