Program: Web Application for Clinical Trials

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client: Lakeridge health

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PROJECT OVERVIEW:

### The web application is provided to the doctors and patients of Lakeridge health hospital an easy way to get through the clinical research trial questionnaire. The application is going to be a time-saver, easy to use and helps understand the questions and the process of the clinical trial as well from a patient’s point of view.

PROJECT STRUCTURE:

### This web application is a non-database web application. The application is made up of HTML, CSS, JavaScript, and JSON. The application is user-friendly and set up to be responsive to different devices using a front-end framework called Zurb Foundations.

PROBLEM BENEFITS:

### This web application will eliminate the following issues:

* The application will make the process of clinical trial significantly easier.
* Saves time for doctors, whenever they want to check a patient's eligibility.
* Anyone can go through this clinical trial to know their eligibility.
* It would be a one-stop web page to check all the available clinical trials.
* After going through any trial, the result will be handy and easy to print for anyone to be accessible.

PROJECT GUIDELINES:

### The figure below is the landing page (First Page) of the web application. This page would be describing all the ongoing clinical trials available in Lakeridge Health.

A screenshot of a map

Description automatically generated

Image-1

Step 1: Anyone wanting to test the trial would start with selecting one of the options available in the above image.

Step 2: After selecting the suitable the user will be directed to the second page of the application. For example, if you have selected Brest cancer you will see something like this:

A screenshot of a cell phone

Description automatically generated

Image-2

THE NUMBERS IN THE ABOVE FIGURE ARE FOR:

1. It shows the clinical trial selected.
2. It is the information icon. A user can click on the icon and get more information about the option.
3. Is the button to submit the selected option and move to the next question.

Step 3: After answering all the questions of a trial you will come to the last page which will show the result of the trial, depending upon the answers selected.

Step 4: If the trial ended up with a result as shown in the image below. The user would be able to take a print of the result for your further needs.

A screenshot of a cell phone

Description automatically generated

Image-3

Step 5: Along with the Print Final Page option for eligible scenarios, if the trial ended up with ineligibility, the user could exit the application or if the user wishes to take another trial, they can just click the restart button shown in the image above.

TECHNICAL GUIDELINES OF THE PROJECT:

* The application is based on JavaScript and Json data for its functionality.
* The options available on the landing page (first page) of the application are hardcoded buttons through HTML. For all the available trials there is one button provided.
* Moving forward to the second page the available options come from data JSON depending on which trial was selected by the user on the first page.
* And the breadcrumbs (refer to #1 from image 2) in the pages come from the JavaScript code which stores the data which is clicked by the user.
* All the designing and the patterns are coded using CSS code.
* The viewport changes its size according to the device used due to the HTML code embedded in Foundation.
* The printable page is also coded through the HTML code with JavaScript pushing the required data into the page.
* All the trial data is stored in Json file.
* The information button also comes from JavaScript and the information provided is the saved in the JSON file as well.

NOTE: As mentioned earlier this web application is a non-database application that works on Json data. So, there would be no storage of user data.

PROJECT EXECUTABLE FILE:

* The main folder name for the web application is 01\_CT.
* Ongoing inside the folder, you will be able to see:

1. Index.html: This file is the main starting point of the application; the application starts once this file is running a browser.
2. CSS: This folder has the design files (app.css, foundation.css, and foundation.min.css).
3. Data: This folder has Json file (nodes.json) which has all the data used in the web application.
4. Img: This folder holds all the required images which are used in the project.
5. Js: This file has the JavaScript files which are used in the web application. There is app.js file that has all the functionality code used in the application. There is a vendor folder also in this folder which has all the files for foundation.
6. ProjectManual.docx: This file is the user manual for using this web application project.

Adding New Data to the JSON File for Futureproofing\*:

\*Always back up nodes.json before editing, as editing incorrectly may break the program.

Within the JSON file, there are 8 arrays. Four of them labelled xNodes (x stands for either lung, urinary, breast or skin), these first four arrays contain all the button possibilities for each type of cancer. Each object in a node array represents a button, and they are laid out like this:

{

"nodesToFollow": [1, 5],

"node": 0,

"name": "Lung Cancer",

"desc": "A malignant lung tumor characterized by uncontrolled cell growth in tissues of the lung. This growth can spread beyond the lung by the process of metastasis into nearby tissue or other parts of the body"

}

Each object has a unique node number, which allows the program to reference the correct information. nodesToFollow contains the node numbers of the following buttons that will be displayed when the current option is selected. Name is what is displayed on the button and desc is what is shown when the informational buttons are clicked. To add a new button, follow the format listed above by adding a new object in the correct array (1 array for each type of cancer). If selecting a, option would not show a button, or leads into a clinical trial, leave nodesToFollow empty.

To add or modify a clinical trial, open the correct array labelled xTrials. A trial object is laid out as such:

{

"name": "ABBVIE MERU M16-298",

"pathToSuccessfulTrial": [0,1,3,4],

"Availability": false

},

The name is the name of the trial. pathToSuccessfulTrial is the order of buttons one must click to see that particular trial; the path *must* start with 0, and be in the order that one clicks the buttons in. Availability is whether or not the trial is accepting new patients at the time. False for not accepting new patients and true for accepting new patients.

NOTE: This project works on a live server as it is using Json files. Don’t try to test the web application offline on any device.

Disclaimer: This manual is created for Lakeridge Health only for understanding the clinical trial research web application project developed by the Group: Metastasis Blockers.