Canterbury Christ Church University

Computing, Digital Forensics and Cybersecurity

BSc Computer Science

2021-22

Individual Project 40 MCOMD3PRJ

Title: The rebuild of a 20-year-old website using modern development techniques.

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This report is submitted in partial fulfilment of the requirement for the BSc/BEng in Computer Science at Canterbury Christ Church University

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Date of Submission: 09/05/2022

ABSTRACT

A website built in 2002 by a web development agency using early technologies was presented by Dr. Dennis Smith, a bariatric surgeon based in Florida. His requests for a new website included similar content to what was already being displayed, along with some additions and the use of modern development strategies and guidelines. He felt that the original site was outdated and attracting less traffic over time. Through a full system analysis, user stories were written to form a list of user requirements, which created a baseline for the designs of the new website. The main goal of the design stage was to create a theme that would span across the entire website and balance user requirements with functionality. Research of modern website development was conducted, focusing on responsive development, usability, and visual complexity. The result of this work was a modern, responsive, accessible website that prioritised the user's needs and was organised in a way that made it easy to navigate.

ACKNOWLEDGEMENTS

I would like to extend my gratitude to my dissertation supervisor, Alexios Louridas, for his insight and advice through the preparation and development of this artefact and paper, and to my client (and father), Dr. Dennis Smith, for entrusting me with something so crucial to his work and for believing in my abilities.

Many thanks to my internship supervisor for teaching me so many of the skills that gave me a strong enjoyment for this work, and to my fiancé, siblings, lecturers, and friends for their encouragement to always present my best work in my projects.

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1 INTRODUCTION

The design and development of modern websites require an understanding of a range of guidelines and policies that assist in creating a refined, effective, and accessible environment for users to experience and interact with. In comparing newer websites to those dating between 10 and 20 years ago, it is evident that developers have spent these years redefining how a website should be structured and what features are the most important to consider. This report outlines research conducted on these subjects alongside a detailed analysis of the artefact that was produced.

The client for this artefact, Dr. Dennis Smith, MD, FACS, FASMBS, is a bariatric surgeon and the medical director of a practice in Central Florida, USA. He presented his personal website that was built by a small agency in the year 2002 and requested that it be replaced with an entirely new development, a ground-up rebuild of both the front and back end. The original website was outdated in design, as it had not been updated since deployment, and as a result was lacking in visual appeal and accessibility and was not responsive to any device smaller than a laptop. Dr. Smith had noticed over the years that traffic to the website had been declining, most likely partly due to the appearance and structure of the site.

1.1 RELATED WORK

The author's previous work is made up extensively of the design and development of websites, both in a professional context and in a more personal setting, such as for local organisations or individual clients. The abilities gained from these experiences were utilised in the development of this artefact and in the research conducted alongside it. The artefact was built using the Kanban framework, an agile software development methodology that requires a visual board with cards for each task and a specific set of columns to feed them into. Studies referenced belong to researchers and developers who have conducted experiments and analyses of specific topics that are touched upon throughout the report, including responsive design, user engagement, accessibility, and data protection.

1.2 OBJECTIVES

The main goal in development was to use research of design techniques and guidelines to create a product that would bring new traffic and more interaction while being accessible and responsive to all devices. A questionnaire would be introduced that would give users a new method of contacting Dr. Smith's office and provide him with the information necessary to begin the evaluation process. The research conducted would assist in building features tailored to what the users need most, while also studying the evolution of websites and the importance of keeping them up to date with new guidelines.

The following report examines every step in the creation of Dr. Smith's new website in detail, starting with a thorough analysis of the original site and where its strengths and weaknesses are, followed by a complete design plan of the new system. The development process and its results are presented in depth, along with the testing of each aspect of the website. Finally, the necessary legal and ethical considerations are discussed, and the report is drawn to a close with the author's analysis of their work, goals, achievements, and limitations.

2 SYSTEM ANALYSIS

A thorough analysis of the originally implemented website was performed to assess the performance, usability, maintainability, and security of the system. Dr. Smith, the owner of the website, gave some information about the creation and maintenance involved to make it what it is today. He explained that the website was built initially in 2002 by a web development agency using HTML4, an early version of CSS3, and ASP.NET, which at the time was a brand-new server-side web development framework (Bos, 2016 and Garcia, 2019). It was noted that Dr. Smith took the maintenance of the website upon himself after it was finished because it was too expensive to continue with the agency. Up until the new website construction began, Dr. Smith continued to update the information on the website but did not find the time to do more than that.

2.1 PREVIOUS WEBSITE

The pages of the Advanced Obesity Surgery website were formatted very simply, with a large white space for the main content, a few navigation boxes in the header, and a sidebar on the left that showed the logo and a full navigation menu. There was also a login space on the sidebar, which Dr. Smith described as a members' portal. Access to this portal gave users the ability to view patient resources such as informational videos, articles, and weight management guides. The public regions of the website included pages about Dr. Smith's background, the hospital he works from, and all the procedures he offers to patients. In the footer of the website was the address and phone number of the hospital.

It is important to note that Dr. Smith did not have a secure certificate for the website at the time, so accessing it via networks within organisations flagged the website as a security risk. Once the new website is implemented, a new certificate will be applied.

During frequent meetings with the client, concerns about the current implementation of the website were discussed. Dr. Smith was unhappy with the members-only region of the site and wanted the resources included there to be publicly available instead. These resources were important not only to Dr. Smith's patients, but also to any user with weight management concerns who found the website, so keeping them restricted limited the reach the website would have. He also had strong concerns about the fact that only a phone number was available for use to contact the bariatric office and suggested a contact form or similar be implemented (Smith, A. & Dr. Smith, 2021; Appendix E for full minutes). The phone number only operates during workday hours. Most of the intended demographic, largely women around age 45, would likely be working during that time and instead would be searching for bariatric programs in the late evening or early morning.

2.2 SYSTEM REQUIREMENTS

The main goal of the reconstruction was to make it easier for users to find exactly what they needed with as little trouble as possible. This required user stories to be written to understand what visitors to the website might be searching for. See Appendix G for the full list of user stories. Using these, the website was navigated on multiple devices starting from the home page to understand where it may have become difficult for users to find what they needed and whether the device being used had any effect on the issue. The creation of user stories and the conducting of the previously mentioned experiments directly led to a set of user requirements. At the highest priority, users should be able to find informational pages by scanning the landing page for basic keywords, such as 'about' and 'resources'. Users should also be able to get in contact with Dr. Smith or the bariatric unit at any time of day instead of only during workday hours.

User interface specifications were found from the points Dr. Smith made about changes he wanted made to the website alongside the user requirements. The most important requirements, such as simple navigation between pages and detailed informational pages about Dr. Smith and his procedures offered, became the priority for the UI. During meetings with Dr. Smith and through examination of the user stories, it could be determined which features of the site would be used the most often. These included the Start Here questionnaire and contact form and the About pages, so these would be made the most accessible with as streamlined navigation to them as possible. Dr. Smith described the targeted demographic as mostly women roughly 45 years of age with a BMI of at least 35 and residing in the USA. There would most likely not be an issue with this age group easily navigating websites (Vogels, 2019), however it was important to keep the design simplified to save time and allow users to find what they need on, for example, a lunch break.

2.3 AIMS OF DEVELOPMENT

The highest priority non-functional requirement was responsive design. This means that the website should perform properly and consistently on as many devices as possible, ranging from mobile phones to desktop PCs (Li, N. and Zhang, B., 2019). It could not be assumed that all users would view the website on a laptop or desktop PC. There also should be consideration of scalability and maintainability, which in the case of a website consist of adding or removing pages and changing or adding styles or content. The CSS stylesheets must be formatted in a way that allows for these changes to happen easily without causing errors in other places, and each page should be able to grow or shrink depending on the amount of content being used. To build the back end, PHP would be used because it does not require licensing to use, unlike ASP.NET, and because it is open source and has extensive documentation. Using PHP, the header and footer would be included at the top and bottom of each page, giving room for all written HTML to nicely fit between them without any large gaps.

This would improve maintainability, allowing Dr. Smith to manipulate the HTML to his liking without having to worry about the header and footer. He noted that his knowledge of HTML would be enough to make changes to text where necessary, and he wouldn’t expect to need to make changes outside of that.

3 SYSTEM DESIGN

Before beginning development of the website, it was necessary to create rough designs for the header, footer, some elements, and each page of the site. This helped visualise what each piece of the website would look like and allowed for Dr. Smith to provide feedback early in the process. An idea cloud was constructed using the system analysis to separate the website into sections based on what content would exist there. This can be viewed in Appendix H. Splitting the website up into regions Home, Gallery, Guides & Resources, About, and Where to Start? not only assisted in the planning for each page, but it also gave a great baseline for the navigation menu that would be found in the header.

A hierarchical template was created to plan how the website pages would be organised into a navigation system (see Appendix I). Inspiration for this format was taken from the structural organisation in previous projects as well as that from other practices' websites that were studied. The pages, not including the home page, were split into three dropdown sections – About, Resources, and Start Here. These titles were chosen when considering one of the user requirements being that users should be able to navigate the website by scanning for keywords that might represent the information they are looking for. The About section would contain all the informational pages about Dr. Smith and his work, while the video gallery, weight management tools, blog, and patient success stories would be contained in the Resources section. The Start Here section led directly to the questionnaire that would help users get in contact with the bariatric unit. Users would be able to navigate to the home page by clicking on the logo in the header.

Microsoft PowerPoint was used to create the designs for each page, which started as wireframes and then were filled in with examples of the content being used. The header and footer were created first because they would be universal across the entire website. The only required content in the header was the logo and the navigation menu, so it could remain simple and would not take away from the main content of the page. Hovering over each tab of the navigation menu would reveal a dropdown list of the pages within that section of the website. Upon scrolling down the page on a laptop or desktop, the header would collapse to allow more space on the screen for main content. To decide what should exist in the footer of the website, inspiration was taken from previous projects as well as the existing Advanced Obesity Surgery website. Typically, the logo or company name will be the most prominent in the footer, followed by some navigation links, contact information, and a copyright statement. Studies on user engagement and visual complexity suggest that the complexity of a website's design directly contributes to a user's first impression of it. More specifically, higher levels of design complexity tend to be less favourable to users than low or moderate complexity (King, A., Lazard, A., and White, S., 2019). These results led to the decision that all pages on the site should have a similar layout that had a good balance of complexity, focusing immediately on the features that

were necessary to users and less on the features which were not required for the website to function properly, such as animations.

3.1 PRIORITIES IN DESIGN

The user and non-functional requirements were prioritised, so it was important to factor in responsive design techniques as well as putting the more important features of the site in easy-to-access places. The most prominent feature of the website was the questionnaire and contact form, so links to this were included in both the header and footer, as well as in multiple places on various pages. Buttons linking to pages that would be heavily visited according to user stories, such as the information about Dr. Smith and the hospital, were made more noticeable so they would stand out against other elements. Frequent meetings took place with Dr. Smith to ensure that every design was presented to him for feedback before being implemented. He also provided newer content to replace the older information on some pages, so some designs were refactored to better fit images and ideas. Each page was modelled in a way that allowed for scalability and maintainability in all cases, so any addition or removal of content would not disarrange the layout. All designs can be found in Appendix J.

3.2 STYLE AND FRAMEWORK SELECTION

Dr. Smith uses social media platform Instagram to connect with his patients and others who may be interested in a bariatric program. The content on his profile follows a general colour scheme and font style that were replicated in the website designs to indicate a continuity and common source between the platforms. Font sizes were not made absolute in the designs, however there was a clear difference in size between headers, sub-headers, and plain text that kept each section distinct. Instead, the decision was made to use the Bootstrap framework in development because there were many appealing features available beyond consistent font sizing. The framework gives defaults for site-wide CSS styling including buttons, element formatting and spacing, and classes that assist with responsive development (Aryal, S., 2019).

4 DEVELOPMENT AND RESULTS

A website was built from the ground up for client Dr. Dennis Smith, a bariatric surgeon working out of AdventHealth Celebration Hospital in Celebration, Florida. He requested that the site included all the content that his previous website already displayed and suggested some extra features – a blog, a video gallery, and a list of patient success stories. The new website was intended for visitors of various backgrounds; however, the main target was people who would qualify for a bariatric program, typically being in their forties and having a BMI over 35. Other user backgrounds to be considered were bariatric surgeons, any medical professionals or students, current patients of Dr. Smith, and people who have had a bariatric operation in the past. Dr. Smith wanted the website to be modern and attractive but not complex or cluttered.

Initially, pages were developed as HTML files, each page having a copy of the header and footer code. Once the header and footer were completed, a PHP file was created for each that is known commonly as a 'partial'. When the site pages were converted to PHP files, the header and footer code was removed and replaced with a section of PHP code, an *include* expression, which imported the header and footer at the beginning and end of each page. This eliminated the need to edit every page when the header or footer needed adjustments, instead allowing just one PHP file to be changed that would take effect on all pages of the site.

The landing page of the website gives a short description of what a user can expect to find as they navigate it. Pages are detailed and informative, balancing the number of pages with the amount of content on each one. To maintain sitewide consistency, the heading for each page is backdropped by a related image that spans the width of the screen. This choice of design helps the user differentiate between the title and content and breaks up a large portion of the whitespace that would otherwise exist. An extra division tag adjacent to the background image creates a blue overlay over the entire image and makes the text on top stand out more, assisted by a higher font weight.

To avoid too many straight edges and corners, some CSS styling was used to give all buttons a rounded edge on two corners. Some elements of the website have transitions using CSS, such as the navigation dropdown menus and the buttons, intended to be eye-catching and to create more depth and flow. All buttons change colour on mouse hover, the "Start Here" buttons have an arrow that shifts slightly to the right, and the navigation menu reveals a dropdown list. These small details give the user a sort of pointer in the right direction while being subtle enough to go almost unnoticed. All CSS styling was implemented using classes with descriptive names instead of inline styling or IDs. This differentiation is important because it is the most flexible and increases scalability. Inline styling forces the developer to add a list of styles to every single element individually, and an ID can only be

used one time on each page file. Both options are still usable but are limiting in terms of scalability and take up significantly more time to implement.

JavaScript was also used in some areas of the website, the most notable being the header. Upon scrolling down any page on the website, the header collapses to about half its height and the logo is cropped into a smaller space, giving more screen height for the main content of the page. The Start Here questionnaire functionality was almost entirely built using JavaScript and some CSS. Upon clicking on one of the first two options, the next section of the form will become visible using the slideDown function. If the user changes their mind, they can simply select the other of the first two options to make the previous section disappear and be replaced with the new one. Hiding irrelevant content helps avoid frequent redirecting to new pages while keeping the questionnaire uncomplicated. If the user fills out information for calculation of their BMI, a JavaScript function detects when all three inputs are filled and immediately runs the calculation. The result is run through an *if* statement to determine whether the user is eligible for a consultation with Dr. Smith. If the user is eligible or wants to discuss a revisional operation, a button appears to direct them to a contact form to fill out their information to be sent to the bariatric office. Depending on which portion of the questionnaire was completed, a variable is added to a query at the end of the website URL that will be picked up by JavaScript on the contact form page to determine which set of information should be visible to the user.

The transition between the Start Here questionnaire and the contact form requires some use of PHP sessions, which use cookies to retain information from one page and send it to the next. A session lasts until the browser is closed or about 24 minutes, which is more than enough time considering the session data will no longer need to be retained once it is copied into the contact form. The PHP session retains the user's height, weight, and existence/lack of pre-existing medical conditions and displays them at the end of the contact form. The intent with this feature is to provide some extra comfort to the user in knowing that Dr. Smith will receive all the data inputted while also demonstrating continuity between the questionnaire and the contact form. There is still discussion with Dr. Smith about how he would like to receive the information from the contact form. Until further decisions are made, the information is formatted into an email message and sent to his email address for viewing.

4.1 SOFTWARE DEVELOPMENT METHOD

The Kanban software development cycle was used for this project, utilising the Clickup project management software to create a Kanban board which can be viewed in Appendix K. The columns for the board from left to right were To Do, Next Up, In Progress, In Review, Completed, and On Hold. While normally a Kanban board uses just To Do, In Progress, In Review, and Completed for columns,

extras were added to give a better understanding of what exactly was going on throughout the development of the website. The Next Up column housed one task at a time and when that task was moved to In Progress, it was replaced by a new task. The On Hold column was only used in specific cases where a task that had already been in progress was suddenly blocked by another task and could not be continued until the other task was completed. The choice of Kanban was made because it requires a visual representation for how many tasks are to be completed and at what pace they should be completed, which is helpful in keeping on track for deadlines.

4.2 Languages and Tools

The website code was stored in a GitHub repository with branches for development, conversion of HTML pages to PHP, and building of the questionnaire. The repository was updated on each branch using the Git CLI with detailed commit messages to keep track of all progress made.

All tools used for the front-end of the website include HTML5, CSS3, and JavaScript, all in their most recent stable versions, as well as the jQuery assistive library and the Bootstrap framework for CSS. JQuery is an add-on to JavaScript that makes document manipulation, function writing, and event handling less complex (jQuery, 2022). The library is very popular with developers today because the syntax is easier to write and read than raw JavaScript. The back end of the website is in PHP with no extra libraries or frameworks. The writing of all code was performed using the Brackets code editor, and PHP pages were uploaded to the client's existing web hosting service, NewTek, using the FTP application FileZilla. Brackets and FileZilla were chosen for this project because they were very familiar and fit nicely with the needs of development.

4.3 Consistency with Design

All designs were able to be replicated using CSS using responsive design techniques, made easier by using the Bootstrap framework, to make them compatible with almost any device in use today. Some designs required alterations for various reasons, usually because they could not be replicated in a way that could still function properly or perform consistently on multiple devices. In these cases, either the design plan was reformatted to be redeveloped, or changes were made directly to the website with feedback from the client. Both design and functionality must be considered in development, and there were some situations where these did not meet, so compromise was made. To list some examples, the questionnaire was redesigned multiple times because some formats resulted in an automatic scroll down the page, which could be jarring to some users. A dark box shadow was added to the navigation dropdown menus because they blended in too much with the white background of the website when opened. Very early on in development, the header logo was made up of two separate images that switched with each other when the header collapsed, but this had to be changed because development

of the transition was increasing the scope of the project very quickly. These were all situations where an unexpected obstacle was met and overcome through a compromise of design and functionality.

Some outdated browsers, such as Internet Explorer or previous versions of Google Chrome, may not allow users to view the website properly due to updates with HTML and CSS that were not included in those versions. It is impossible to accommodate for every single browser and device available to the public, however attempts were made to include as many as possible by avoiding using some of the extremely new properties of HTML and CSS that may not yet be compatible with current versions of browsers. The result was a website that is compatible with all browsers that have been updated in the last few years as well as all smartphones and tablets from the last decade.

5 UNIT/SYSTEM TESTING

To ensure everything runs smoothly on the website, feedback was received from people who had access to a variety of devices and browsers when a new page or feature was made available. It was very important to test responsive development by navigating the website on different devices while following the user stories. The feature that needed the most testing was the Start Here questionnaire. There were multiple ways to complete it, so a set of data was created that would match every solution possible multiple times. This test data is listed in Appendix L. The client also assisted with testing of the questionnaire and gave feedback when bugs were found.

The questionnaire is tied to a set of JavaScript functions that determine whether a user is eligible for a consultation by calculating the user's BMI from height and weight and considering whether they have pre-existing obesity related medical conditions. The formula to calculate BMI is *(weight / (height * height)) * 703* (Ramsay Health Care, 2022). In this formula, weight must be in lbs and height must be in inches because these are the units used in the United States. If the user has a BMI of 40+, or of 35+ with pre-existing medical conditions, they are considered eligible. Otherwise, they are not eligible. This decision comes from the US National Institutes of Health BMI criteria (2010) and is the method used for most insurance carriers in the US at the present time. The set of data included heights ranging from 4' to 6'6" in six-inch intervals, and for each height recorded, a weight value was selected to match a BMI of 20-25, 35, and 40 (Rush Edu, 2022). Each height and weight combination was input twice, once with pre-existing medical conditions and once without. In the table of data, a column was filled with the expected results, and then a new column was added for actual results every time the data was used.

This test was run three times. In the first run, a BMI less than 40 resulted with "No," or ineligible, and a 40+ BMI responded with "Yes." If the data presented a BMI between 35 and 40 with pre-existing obesity related medical conditions, there was no response from the script. This was recorded in the table as "Null." After this, the script was reworked completely to make a more efficient use of functions and fix some errors, and the test data was run again. This time, all conditions gave a response, but for a BMI that was rounded up to 35, such as 34.7, the script responded "No" with pre-existing medical conditions when the expected result was "Yes." This was caused by using *>= 35* instead of *> 34*. Once this replacement was made, the data was run for a third time, resulting in a complete pass with no errors.

5.1 DATA USAGE AND ACCESSIBILITY

All completed pages of the website work as intended with no errors, including the questionnaire. The contact form following the questionnaire currently submits to the client's email address, which is not

final and will be addressed once a decision is made about how the data will be used. The user can fill in the form and submit it and will then see a “contact form submitted” page that links back to the home page. All buttons and links direct to another page. Some pages have not been built yet as they are still being designed with the client, so links to these have been replaced with a temporary page informing the user that the page is under construction. For accessibility purposes, all images have descriptive alternate text, and pages can be viewed in a browser’s ‘reader view’ or ‘reader mode’ to remove the styling and focus simply on the main content. Every feature on the website has a use that relates to user stories or to the client’s requests, eliminating any unnecessary clutter.

When considering human-computer interaction (HCI) principles in development, there is a blend between usability and accessibility that must be addressed. A website can be usable without being accessible, and vice versa. For example, the product may tick all the boxes of being efficient, easy to use, safe, and effective for most people, but if some groups cannot use it due to the lack of compatibility with a screen reader, that is an indication that HCI principles have not been thoroughly considered. The idea of HCI is to balance what the user needs and what is attainable with respect to the design, layout, and styling of the website as well as the features and their functionalities (Jones, M., 2007).

6 LEGAL CONSIDERATIONS

When building a website for an individual who represents a company or practice, it is important to consider every image and logo used within the website and whether permission was granted to use them. Depending on how the image will be used, different types of permissions may be needed, such as a corporate logo versus a photo of a work of art (University of York, 2022). All images used on the website were sourced either directly from AdventHealth or were images that Dr. Smith already owned. If permission to use an image was not granted, that image would not be used and instead replaced with one that was permitted.

Because there is a contact form included on the website that retains data input by users, that data must be stored securely following the given privacy policy. This typically includes a statement that the data will not be shared with any other parties and will be completely erased once it is no longer needed. There are many websites that can generate privacy policies for those who do not have extensive legal knowledge. The website used for Dr. Smith's privacy policy was recommended by other web developers and uses legitimate terminology to structure a policy tailored to the needs of the owner (TermsFeed, 2022). Because the website was built for a practice based in Florida, any retained data must follow the Florida Information Protection Act (FIPA) of 2014 as well as the Health Insurance Portability and Accountability Act (HIPAA), which is in effect nationwide. FIPA requires that measures are taken to protect the user data being recorded by businesses, and HIPAA protects the privacy of patient information (The Florida Attorney General's Office, 2011 and Florida Health, 2019). As a result of HIPAA, only Dr. Smith was able to access the membership database that existed alongside his old website, so that became a main factor in the decision to leave it out of the new design. Data was only going to be recorded from submission of the contact form by a user, so this was the only place where these laws needed consideration.

The Data Protection Act was considered in the writing of this report to ensure no personal data was included (Gov.UK, 2018). However, the UK General Data Protection Regulation (GDPR) and the Data Protection Act were not concerns in development of the website because the practice the website belongs to is based in the United States, where these regulations do not apply. The Computer Misuse Act of 1990 is also a UK regulation that does not apply here (Department of Health, 1990). A similar law in the United States, the Computer Fraud and Abuse Act, must be considered instead. This act makes it unlawful to access protected computers without permission, use a computer to gain access to restricted information, threaten damage to a protected computer, and other similar acts (Thomson Reuters Practical Law, 2022). These acts are not at risk of being committed in relation to the developed artefact.

7 ETHICAL CONSIDERATIONS

Most of the text content used on the website was ported from Dr. Smith's original website, per his requests. Some wording was changed to ensure that all content was inclusive and unbiased. This meant reading all the text thoroughly to check for gendered terms, assumptions of users' lifestyle or sexual orientation, assumptions of religious views of users, race, etc. This also applies to membership forms, contact forms, or any input fields that request, for example, the user's gender. Many organisations have opted to just ask for a user's pronouns, however there are multiple routes that could be used to be as inclusive as possible (Querini, V., 2021). The contact form used on Dr. Smith's website does not ask for gender as it is not necessary at that point.

There are ethical issues to consider relating to Canterbury Christ Church University, such as the use of human participants in research. There are guidelines detailed about interviews, questionnaires, and experiments and how to navigate those in an ethical way. Part C of CCCU's Research Ethics Policy details this regarding students in undergraduate and postgraduate programmes (CCCU Academic Board, 2020). No personal data was recorded in asking family and friends to assist in testing the artefact, only which browser and device they used as well as their feedback.

7.1 ACCESSIBILITY

In the development stages of the website, it is easy to forget that all users do not interact with computers and mobile devices in the same way. Many people use the keyboard to navigate a website or a screen reader to help view content, and if these situations are not considered, these people may be deterred from using the website altogether. Following UC Berkeley's *Top 10 Tips for Making Your Website Accessible* (2022) and Adam Scott's *Principles of Ethical Web Development* (2016), there are a few steps that can be taken to make accessibility attainable, such as adding descriptive alternative text to images, using the proper hierarchy of HTML tags for text, and using labels for input fields in forms. Developing the website to be responsive to most devices is another way to make it more accessible. These factors were all thoroughly considered in development to make sure the website followed proper standards.

8 CONCLUSION

This artefact development explored the factors that must be considered by a developer when planning, designing, and constructing something that will be used regularly by the public. A full analysis of Dr. Smith's original website was conducted during meetings with him to discuss his requests for the new website build. User stories were created to find the user requirements of the website, which in turn were used as a baseline for the designs of each page. The aim in designing the website was to find a balance of visual complexity that would leave a positive first impression on users, prioritising the features that had a purpose directly correlating to user requirements and putting less focus on features that did not.

In development, the website was built as HTML pages and later converted to PHP, separating the header and footer into partials to reduce duplicate code. CSS was used for styling and animations with some assistance from the Bootstrap framework, which gave useful default classes to help maintain consistency throughout the website, and for animations alongside JavaScript and jQuery. In the development of the questionnaire that would help users find the right next step depending on their needs, PHP was used to save data to sessions and send that data to the contact form page when it was loaded. The questionnaire was tested using a table of data that included a wide range of heights and weights, allowing it to be completed in as many ways as possible. Feedback was also received from family and friends who viewed the website from different devices and browsers, using the user stories to navigate it. During planning and development, it was important to consider the data protection laws in the United States, specifically Florida, where Dr. Smith's practice is based. In terms of the ethics of developing websites, all content was checked for wording that may not have been inclusive of gender, race, orientation, religion, etc. It was also crucial to ensure that the website was accessible to all users, including those using screen readers or who navigate websites using the keyboard. This required adding descriptive alternate text to images and following the proper hierarchy of HTML typography tags.

8.1 EVALUATION OF WORK

The original plan for the website included implementation of a blog, video gallery, and resources page. It was quickly understood that these were out of scope for completion by the submission date, so an agreement was made with the client that these would be designed and developed after the rest of the website was ready. Considering how little PHP was known before this artefact was developed, the quality of the back end of the website exceeded expectations and displayed the author's best abilities at the time. The designs of each page were very similar to each other and, if more time had been allocated to that stage of planning, could have been made more intricate. However, this did not lead to any lack of functionality or efficiency. Communication between the author and the client was

frequent, transparent, and thorough, making it easy to prioritise his requests and ensure he was kept updated on the progress of the development. Compared to the original intent of the artefact, the scope increased beyond what originally was discussed, however the ideas of design remained consistent.

Many new skills and abilities were developed during each stage of this project. The author's experience and confidence in writing PHP and JavaScript increased significantly, as well as experience in interacting directly with a supervisor and a client and relaying information between the two.

8.2 FUTURE WORK

In the future, design and development will continue for the website to implement the remaining requests from Dr. Smith, including but not limited to a blog, video gallery, and pre- and post-op resources. This will bring further skill development, most specifically in the writing of PHP. Further meetings with the client will occur to keep consistent communication during development. To bring the contact form further, a secure database will likely be built to store form submissions. Once the client is satisfied with the website, the original one will be taken down and replaced with the new development. From that point forward, maintenance of the website will continue as needed. Research in responsive development, accessibility, and any new development strategies will continue even after this project is completed to keep up to date with modern technology.

9 REFERENCES

Aryal, S. (2019). *BOOTSTRAP – A Front-End Framework for Responsive Web Design*. Available at: https://www.theseus.fi/bitstream/handle/10024/161309/Suman%20Aryal.pdf?sequence=2&isAllowed=y (Accessed: 26 April 2022).

Bos, B. (2016). *20 Years of CSS*. Available at: https://www.w3.org/Style/CSS20/ (Accessed: 20 April 2022).

CCCU Academic Board (2020). *Research Ethics Policy*. Available at: https://www.canterbury.ac.uk/research-and-consultancy/documents/research-ethics-policy-v2.pdf (Accessed: 01 May 2022).

Department of Health (1990). *The Computer Misuse Act 1990*. Available at: https://www.health-ni.gov.uk/articles/computer-misuse-act-1990 (Accessed: 20 April 2022).

Florida Health (2019). *Health Insurance Portability and Accountability Act*. Available at: https://www.floridahealth.gov/about/patient-rights-and-safety/hipaa/index.html (Accessed: 30 April 2022).

Garcia, D. (2019). *The History of ASP.NET – Part I*. Available at: https://www.dotnetcurry.com/aspnet/1492/aspnet-history-part-1 (Accessed: 20 April 2022).

Gov.UK (2018). *The Data Protection Act*. Available at: https://www.gov.uk/data-protection (Accessed: 20 April 2022).

Jones, M. (2007). *Introduction to HCI*. Available at: https://www.cs.bham.ac.uk/~rxb/Teaching/HCI%20II/intro.html (Accessed: 03 May 2022).

jQuery (2022). *jQuery*. Available at: https://jquery.com/ (Accessed: 06 March 2022).

King, A., Lazard, A., and White, S. (2019). *The influence of visual complexity on initial user impressions: Testing the persuasive model of web design*. Available at: https://www.tandfonline.com/doi/full/10.1080/0144929X.2019.1602167?scroll=top&needAccess=true (Accessed: 15 April 2022).

Li, N. and Zhang, B. (2019). *The Design and Implementation of Responsive Web Page Based on HTML5 and CSS3*. Available at: https://ieeexplore.ieee.org/abstract/document/8945729 (Accessed: 26 April 2022).

National Institutes of Health (2010). *NIH study identifies ideal body mass index*. Available at: https://www.nih.gov/news-events/news-releases/nih-study-identifies-ideal-body-mass-index (Accessed 08 March 2022).

Querini, V. (2021). *How to Design for Every Gender*. Available at: https://careerfoundry.com/en/blog/ux-design/design-for-every-gender/ (Accessed: 01 May 2022).

Ramsay Health Care (2022). *How is BMI Calculated?*. Available at: https://www.ramsayhealth.co.uk/weight-loss-surgery/bmi/bmi-formula (Accessed: 08 March 2022).

Rush Edu (2022). *How Much Should I Weigh?*. Available at: https://www.rush.edu/how-much-should-i-weigh (Accessed: 28 April 2022).

Scott, A. (2016). *Principles of Ethical Web Development*. Available at: https://www.ethicalweb.org/ (Accessed: 22 April 2022).

Smith, A. & Dr. Smith (2021). 'Item 12'. *Transcript of Meeting with Client 17 October 2021*. Zoom Meeting.

TermsFeed (2022) *Trusted legal agreements*. Available at: https://www.termsfeed.com/ (Accessed: 18 April 2022).

The Florida Attorney General's Office (2011). *How to Protect Yourself: Data Security*. Available at: http://myfloridalegal.com/pages.nsf/Main/53D4216591361BCD85257F77004BE16C (Accessed: 28 April 2022).

Thomson Reuters Practical Law (2022). *Computer Fraud and Abuse Act (CFAA)*. Available at: https://uk.practicallaw.thomsonreuters.com/2-508-3428?transitionType=Default&contextData=(sc.Default)&firstPage=true (Accessed: 30 April 2022).

UC Berkeley (2022). *Top 10 Tips for Making Your Website Accessible*. Available at: https://webaccess.berkeley.edu/resources/tips/web-accessibility (Accessed: 03 May 2022).

University of York (2022). *Copyright: A Practical Guide*. Available at: https://subjectguides.york.ac.uk/copyright/images (Accessed: 28 April 2022).

Vogels, E. (2019). *Millennials stand out for their technology use, but older generations also embrace digital life*. Available at: https://www.pewresearch.org/fact-tank/2019/09/09/us-generations-technology-use/ (Accessed: 26 April 2022).

10 BIBLIOGRAPHY

Bootstrap team (2021). *Bootstrap Docs - Introduction*. Available at: https://getbootstrap.com/docs/5.1/getting-started/introduction/ (Accessed: 06 March 2022).

Dr. Shillingford n.d. *Advanced Laparoscopic General & Obesity Surgery*. Available at: https://www.drshillingford.com/ (Accessed: 15 March 2022).

HCA Florida Physicians n.d. *Weight Loss Surgery*. Available at: https://www.hcafloridaphysicians.com/specialties/weight-loss-surgery (Accessed: 15 March 2022).

Imtiaz, S. (2016). *The Psychology Behind Web Design*. Available at: https://www.researchgate.net/publication/312146392_The_Psychology_Behind_Web_Design (Accessed: 15 April 2022).

Joseph, A. and Murugesh, R. (2020). *Potential Eye Tracking Metrics and Indicators to Measure Cognitive Load in Human-Computer Interaction Research*. Available at: https://bhu.ac.in/research_pub/jsr/Volumes/JSR_64_01_2020/37.pdf (Accessed: 26 April 2022).

Laja, P. (2020). *10 Useful Findings About How People View Websites*. Available at: https://cxl.com/blog/10-useful-findings-about-how-people-view-websites/ (Accessed: 18 April 2022).

Say No to Obesity n.d. *Welcome to The Center for Metabolic & Obesity Surgery*. Available at: https://saynotoobesity.com/ (Accessed: 15 March 2022).

Scaled Agile Framework (2021). *Nonfunctional Requirements*. Available at: https://www.scaledagileframework.com/nonfunctional-requirements/ (Accessed: 18 March 2022).

The PHP Group (2022). *PHP - Session Handling*. Available at: https://www.php.net/manual/en/book.session.php (Accessed: 03 April 2022).

The PHP Group (2022). *PHP - Include*. Available at: https://www.php.net/manual/en/function.include.php (Accessed: 03 April 2022).

W3Schools (2022). *CSS Transitions*. Available at: https://www.w3schools.com/css/css3_transitions.asp (Accessed: 25 March 2022).

W3Schools (2022). *How To - Sticky/Affix Navbar*. Available at: https://www.w3schools.com/howto/howto_js_navbar_sticky.asp (Accessed: 07 March 2022).

W3Schools (2022). *CSS background-position Property*. Available at: https://www.w3schools.com/cssref/pr_background-position.asp (Accessed: 07 March 2022).

APPENDIX A - GLOSSARY

Accessibility: The availability of a website to be used by people with impairments that make it more difficult to use a computer.

ASP.NET: A back-end programming language

Back end: The server side of an application

Bariatric: Relating to the prevention and treatment of obesity

BMI: Body Mass Index

Bootstrap: A CSS framework that helps make websites responsive

CLI: Command line interface

CSS: A language used to create the styles on a website

Footer: A section at the bottom of a web page that is separate from the main content

Front end: The side of an application that can be interacted with by a user

FTP: File Transfer Protocol

Header: A section at the top of a web page that is separate from the main content and usually contains a navigation menu

HTML: A markup language used to create the structure of a website

Human-Computer Interaction: The study of design relating to the interaction between users and applications

JavaScript: A language used to manipulate the behaviour of the front end of a website

jQuery: An assistive language that simplifies JavaScript syntax and adds extra functions

Kanban: An agile software development methodology that requires a visual board with cards for each task and a specific set of columns to feed them into

Maintainability: The range at which an application's quality can be retained

Nonfunctional requirements: Criteria used to judge how well an application operates, such as maintainability, scalability, and usability

Partial: A PHP file that contains a small section of code which must be included into another file, not run on its own

PHP: A back-end programming language

Responsive: Relating to the ability a website has to adapt to the size of the screen it is being accessed on

Scalability: The ability of an application to be expanded without system failure

UI (User Interface): The face of an application that includes visual features to be interacted with

Usability: How well an application can be used

User requirements: Requirements expected of an application by the user

APPENDIX B – MARKING SCHEME

Refer to default marking scheme.

APPENDIX C – CHANGES TO PROJECT INITIATION DOCUMENT

Deliberately left blank.

APPENDIX D – LINK TO GITHUB REPOSITORY

https://github.com/audcsm/aos-site

APPENDIX E – CLIENT MEETING MINUTES

Date	Notes
07 July 2021	http://www.advancedobesitysurgery.com/ Original website: First made in 2002 Minor updates in later years Lots of old pages taking up space Website used for patients to find him and contact him, as well as educate people about the type of procedures he performs Original website written by a company but maintained by himself Updated some information but left it mostly original to maintain Google search rankings Mostly just HTML, some ASP where necessary Going to be rebuilt in PHP with 'modern' HTML5/CSS/JS Members only section (unused currently) that will be left untouched due to HIPAA as it contains patient information Client requests: - Engaging design, all pages useful - Appeal mostly to women and people under 40 - Not "in your face" but still encouraging/empowering - Blog/article section, page that sorts them by topic - Interactive things, videos, voice recordings
17 October 2021	- Overall refresh of look, feel, interactive-ness - Videos page already exists but could be made more modern - Sections for different types of informational videos, including revisions and use of the robot o He records all procedures he performs, so there would be a lot of content there o Would need to have proper search engine optimisation - SEO in general would be useful - Diet guides, documents, recipes, other resources - Member area blocks resources from non-members, would want to remove this function and make it publicly available - Certificate is not currently secure - Make it as modern and up to date as possible, as well as responsive/accessible on mobile and tablets - User stories o f, 45, BMI 42, probably shopping for a program o Need to see all options he provides as well as information about him and the hospital o Quick way of getting in contact to show interest o Fillable form for getting in contact with the office to then book an appt o Education provided, "getting started" area
10 January 2022	Do you have a way of obtaining patient experience stories that could be displayed on the website? - Yes, patient success stories would be a good addition

	What audiences do you expect to visit the website, and what do you expect their intentions to be in visiting your website? (Follow up, who are the procedure videos for?) - Medical students, medical professionals, people looking for a programme, current patients, patients of other surgeons, people with bariatric surgery history, other surgeons - Potential patients would be looking for information and a way to get in contact - Medical students/professionals and surgeons would be looking for information and procedural videos
07 March 2022	Questionnaire Brainstorm BMI calculator Has the user previously had bariatric surgery? - If yes, lead to revision info and resources - If no, calculate BMI, potentially send to contact form Contact form has patient info, insurance info, BMI, operation interest

APPENDIX F – SUPERVISOR MEETING MINUTES

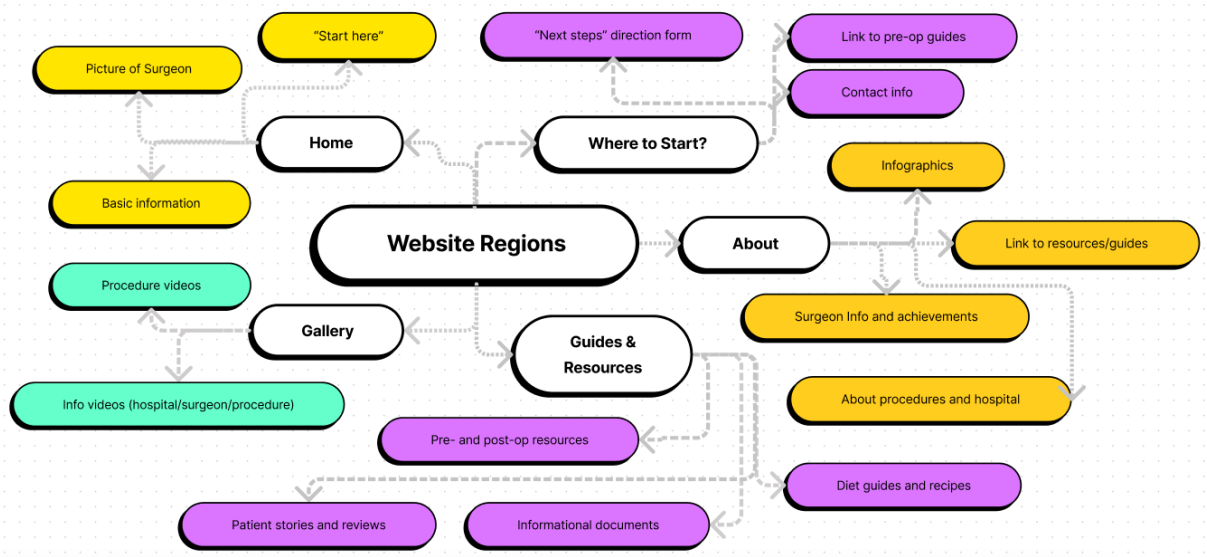
Date	Notes
21 September 2021	- Talk to client about how this is going to look, ask for other ideas about things he may want to implement - Do some research about other surgeons' practice websites - Create some user stories - Wireframes would be useful - Transcribe meetings with the client
25 October 2021	- What hosting and software am I using? - Getting started quiz ending with type of contact info / next steps - Next steps: user stories, and then markups/hierarchy/requirements - By the end of this semester: PID (in a sense) - user stories, requirements, hierarchy, etc - My "literature review" is meetings with client as well as viewing other surgeons' websites - What kind of information will be stored from the user?
21 March 2022	Next steps - create blog, video gallery, and patient resources pages - blog may be out of scope, and I will include that in report if so - write outline for report - fill placeholder media with real media on the website - meet with client again to finalise the website - writeup on the research done about web dev techniques/guidelines - responsive Is it ethical to put age restricted videos directly on the site? Notes for dissertation - introduction: aim, goal of creating the website, why does the customer need the website? what does the website need to do to achieve that? - lit review: hui, colours used, font size, etc. why was everything laid out the way it was? - results/discussion: about the website and tools used, how the backend is setup, how objectives were achieved. design constraints, technical limitations, testing - conclusion: limitations, time constraints, did I achieve my goals, next steps, future developments - user guide? - designs in appendix
06 May 2022	- Keep appendix in order of writing after ABC, include minutes of meetings with both client and supervisor - System analysis, include why use of PHP with citations. justify why selected everything - Tie things back into aim and objectives to help the reader understand - Be careful of repetition - Legal considerations, licensing of third-party libraries - Number the sections and maybe add subheadings - Download zip from GitHub and include link in document

APPENDIX G – USER STORIES

User Story	Acceptance Criteria
As a potential bariatric surgery patient I want to easily access information about each type of surgery So that I know which one is right for me	Given the landing page of the website When I check the navigation menu in the header Then I can navigate to the procedures page and read about each one
As a potential bariatric surgery patient I want to read about Dr. Smith and his achievements and strengths So that I can understand where he stands out against other options	Given the landing page of the website When I read the landing page content Then I can click “Meet Dr. Smith” to learn more about him
As a recruiter I want to read about Dr. Smith’s background and achievements So that I can decide if he is a good fit for a role	Given the landing page of the website When I read the landing page content Then I can click “Meet Dr. Smith” to learn more about him
As a medical student or professional I want to view procedural videos So that I can learn about the procedures Dr. Smith performs	Given the landing page of the website When I check the navigation menu in the header Then I can navigate to the video gallery page and see procedural videos
As a pre-op patient I want to read information about preparing for the procedure So that I feel prepared and ready when the time comes	Given the landing page of the website When I check the navigation menu in the header Then I can navigate to the pre- and post-op resources page and read about pre-op preparation
As a post-op patient I want to read recipes and diet guides So that I can maintain my weight loss journey safely	Given the landing page of the website When I check the navigation menu in the header Then I can navigate to the pre- and post-op resources page and read about post-op weight management
As a potential bariatric surgery patient I want to contact Dr. Smith about a consultation So that I can take the first step in my weight loss journey	Given the landing page of the website When I read the landing page content Then I can click “Start here” and fill out a survey and contact form for a consultation
As a post-op patient I want to contact Dr. Smith about a revision So that I can recover from a previous operation	Given the landing page of the website When I read the landing page content Then I can click “Start here” and fill out a survey and contact form for a revision
As a pre-op patient I want to read about the hospital Dr. Smith works at So that I can get an idea of where my operation will take place	Given the landing page of the website When I read the landing page content Then I can click “Read more” and learn about the hospital
As a post-op patient I want to read updates from Dr. Smith on his latest ideas about weight management and bariatric surgery	Given the landing page of the website When I check the navigation menu in the header Then I can navigate to the blog page to read his latest entries

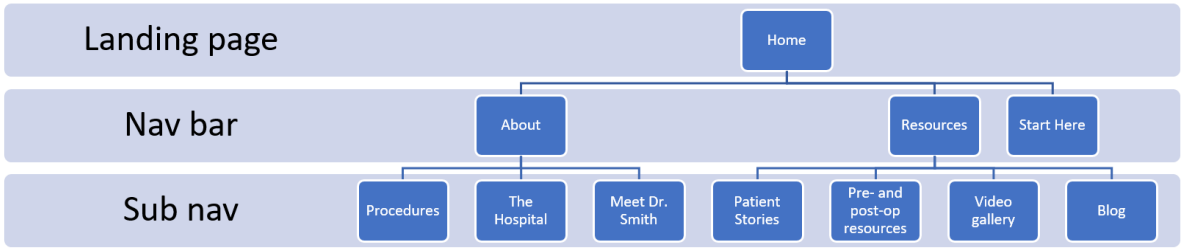
APPENDIX H – IDEA CLOUD

Created using Figma.



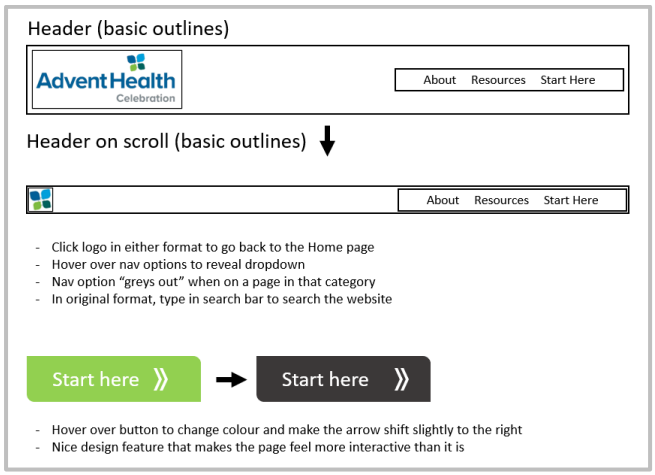
APPENDIX I – NAVIGATION BAR HIERARCHY

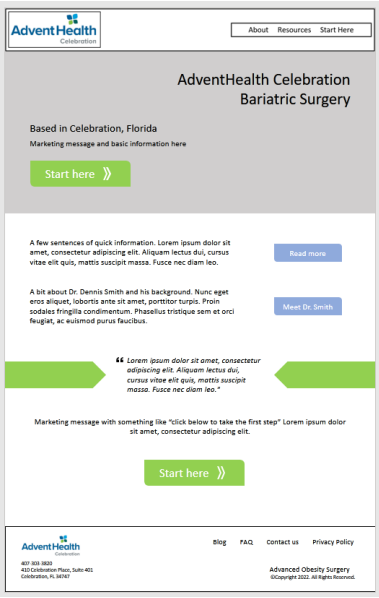
Created using PowerPoint.

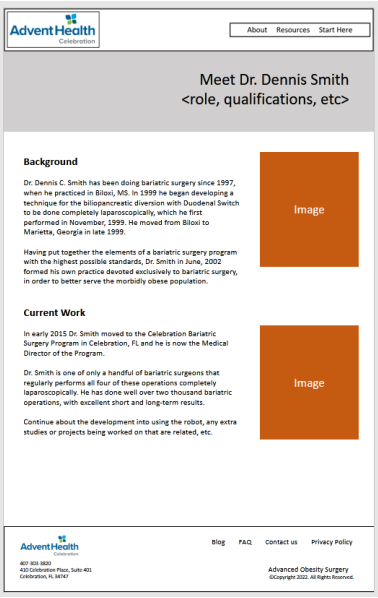


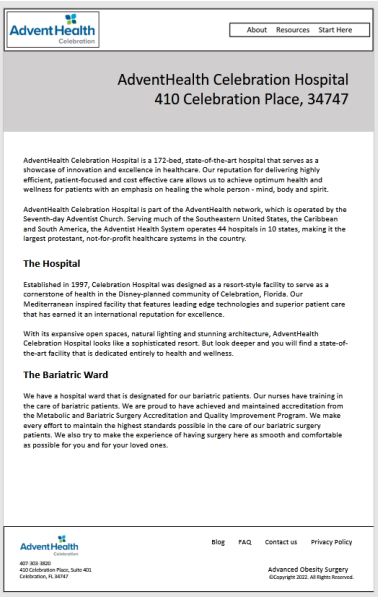
APPENDIX J – PAGE DESIGNS

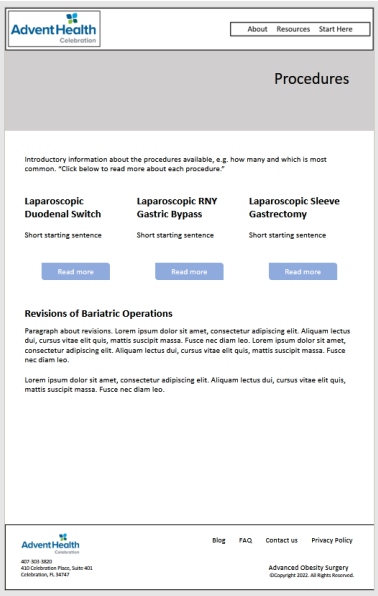
Created using PowerPoint.

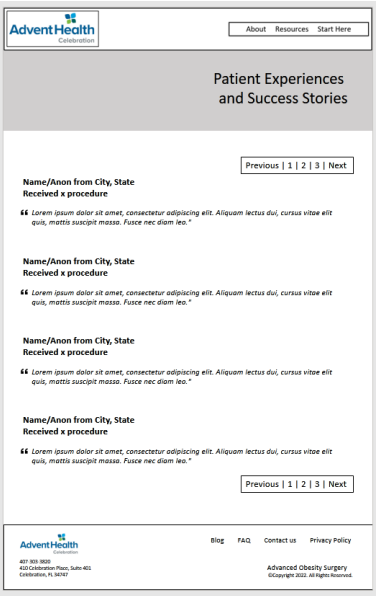


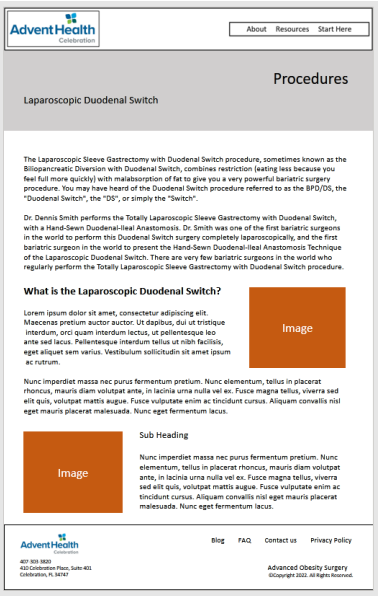


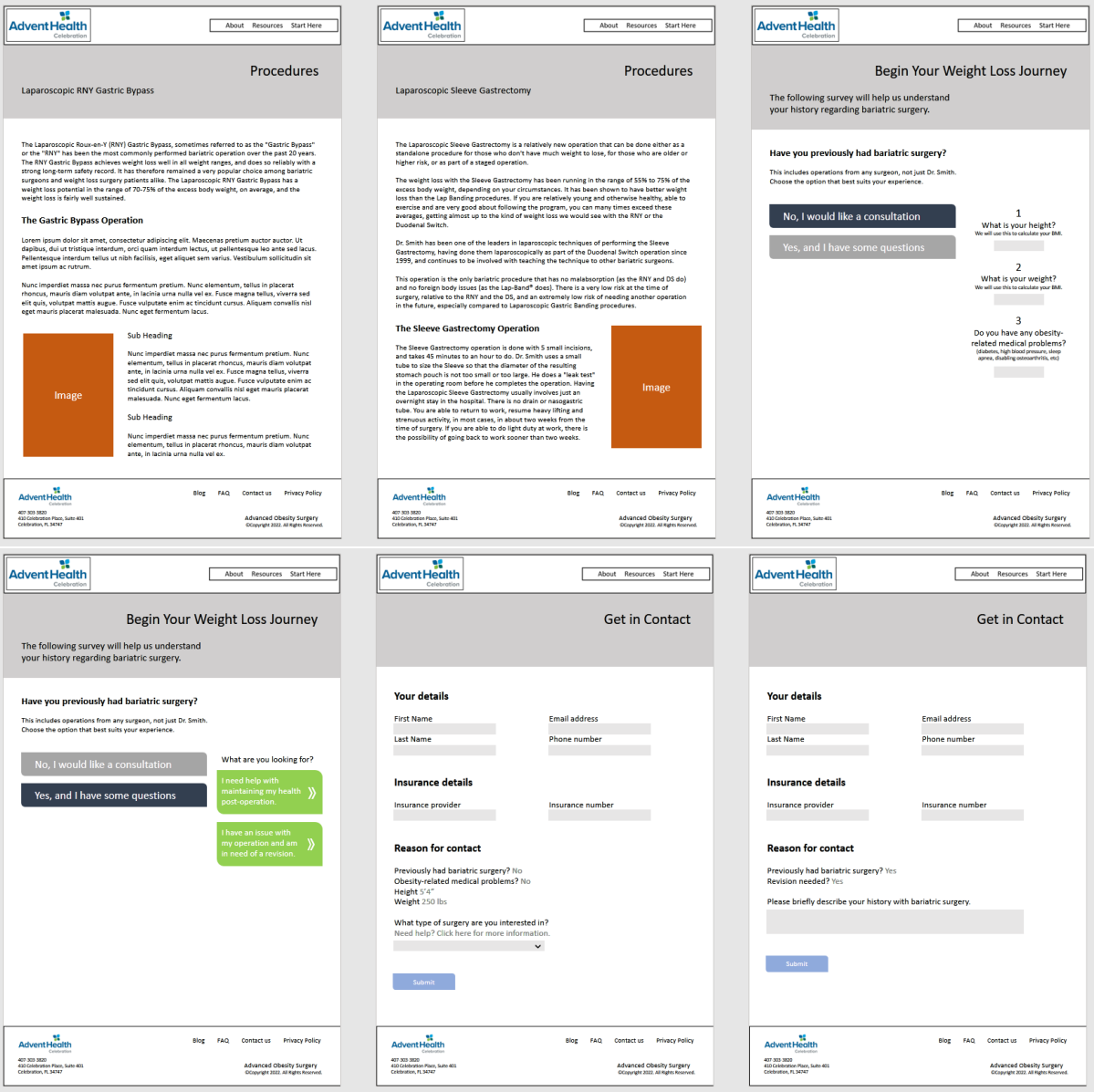








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About Resources Start Here
Procedures
Laparoscopic RNY Gastric Bypass
The Laparoscopic Roux-en-Y (RNY) Gastric Bypass, sometimes referred to as the "Gastric Bypass" or the "RNY" has been the most commonly performed bariatric operation over the past 20 years. The RNY Gastric Bypass achieves weight loss well in all weight ranges, and does so reliably with a strong long-term safety record. It has therefore remained a very popular choice among bariatric surgeons and weight loss surgery patients alike. The Laparoscopic RNY Gastric Bypass has a weight loss potential in the range of 70-75% of the excess body weight, on average, and the weight loss is fairly well sustained.
The Gastric Bypass Operation
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas pretium auctor auctor. Ut dapibus, dui ut tristique interdum, orci quam interdum lectus, ut pellentesque leo ante sed lacus. Pellentesque interdum tellus ut nibh facilisis, eget aliquet sem varius. Vestibulum sollicitudin sit amet ipsum ac rutrum.
Nunc imperdiet massa nec purus fermentum pretium. Nunc elementum, tellus in placerat rhoncus, mauris diam volutpat ante, in lacinia urna nulla vel ex. Fusce magna tellus, viverra sed elit quis, volutpat mattis augue. Fusce vulputate enim ac tincidunt cursus. Aliquam convallis nisl eget mauris placerat malesuada. Nunc eget fermentum lacus.
Image
Sub Heading
Nunc imperdiet massa nec purus fermentum pretium. Nunc elementum, tellus in placerat rhoncus, mauris diam volutpat ante, in lacinia urna nulla vel ex. Fusce magna tellus, viverra sed elit quis, volutpat mattis augue. Fusce vulputate enim ac tincidunt cursus. Aliquam convallis nisl eget mauris placerat malesuada. Nunc eget fermentum lacus.
Sub Heading
Nunc imperdiet massa nec purus fermentum pretium. Nunc elementum, tellus in placerat rhoncus, mauris diam volutpat ante, in lacinia urna nulla vel ex.
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Advanced Obesity Surgery
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AdventHealth Celebration
About Resources Start Here
Procedures
Laparoscopic Sleeve Gastrectomy
The Laparoscopic Sleeve Gastrectomy is a relatively new operation that can be done either as a standalone procedure for those who don't have much weight to lose, for those who are older or higher risk, or as part of a staged operation.
The weight loss with the Sleeve Gastrectomy has been running in the range of 55% to 75% of the excess body weight, depending on your circumstances. It has been shown to have better weight loss than the Lap Banding procedures. If you are relatively young and otherwise healthy, able to exercise and are very good about following the program, you can many times exceed these averages, getting almost up to the kind of weight loss we would see with the RNY or the Duodenal Switch.
Dr. Smith has been one of the leaders in laparoscopic techniques of performing the Sleeve Gastrectomy, having done them laparoscopically as part of the Duodenal Switch operation since 1999, and continues to be involved with teaching the technique to other bariatric surgeons.
This operation is the only bariatric procedure that has no malabsorption (as the RNY and DS do) and no foreign body issues (as the Lap-Band® does). There is a very low risk at the time of surgery, relative to the RNY and the DS, and an extremely low risk of needing another operation in the future, especially compared to Laparoscopic Gastric Banding procedures.
The Sleeve Gastrectomy Operation
The Sleeve Gastrectomy operation is done with 5 small incisions, and takes 45 minutes to an hour to do. Dr. Smith uses a small tube to size the Sleeve so that the diameter of the resulting stomach pouch is not too small or too large. He does a "leak test" in the operating room before he completes the operation. Having the Laparoscopic Sleeve Gastrectomy usually involves just an overnight stay in the hospital. There is no drain or nasogastric tube. You are able to return to work, resume heavy lifting and strenuous activity, in most cases, in about two weeks from the time of surgery. If you are able to do light duty at work, there is the possibility of going back to work sooner than two weeks.
Image
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Advanced Obesity Surgery
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AdventHealth Celebration
About Resources Start Here
Begin Your Weight Loss Journey
The following survey will help us understand your history regarding bariatric surgery.
Have you previously had bariatric surgery?
This includes operations from any surgeon, not just Dr. Smith. Choose the option that best suits your experience.
No, I would like a consultation
Yes, and I have some questions
1
What is your height?
We will use this to calculate your BMI.
2
What is your weight?
We will use this to calculate your BMI.
3
Do you have any obesity-related medical problems?
(diabetes, high blood pressure, sleep apnea, disabling osteoarthritis, etc)
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Advanced Obesity Surgery
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AdventHealth Celebration
About Resources Start Here
Begin Your Weight Loss Journey
The following survey will help us understand your history regarding bariatric surgery.
Have you previously had bariatric surgery?
This includes operations from any surgeon, not just Dr. Smith. Choose the option that best suits your experience.
No, I would like a consultation
Yes, and I have some questions
What are you looking for?
I need help with maintaining my health post-operation.
I have an issue with my operation and am in need of a revision.
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©Copyright 2022. All Rights Reserved.
AdventHealth Celebration
About Resources Start Here
Get in Contact
Your details
First Name
Last Name
Email address
Phone number
Insurance details
Insurance provider
Insurance number
Reason for contact
Previously had bariatric surgery? No
Obesity-related medical problems? No
Height 5'4"
Weight 250 lbs
What type of surgery are you interested in?
Need help? Click here for more information.
Submit
Blog FAQ Contact us Privacy Policy
Advanced Obesity Surgery
©Copyright 2022. All Rights Reserved.
AdventHealth Celebration
About Resources Start Here
Get in Contact
Your details
First Name
Last Name
Email address
Phone number
Insurance details
Insurance provider
Insurance number
Reason for contact
Previously had bariatric surgery? Yes
Revision needed? Yes
Please briefly describe your history with bariatric surgery.
Submit
Blog FAQ Contact us Privacy Policy
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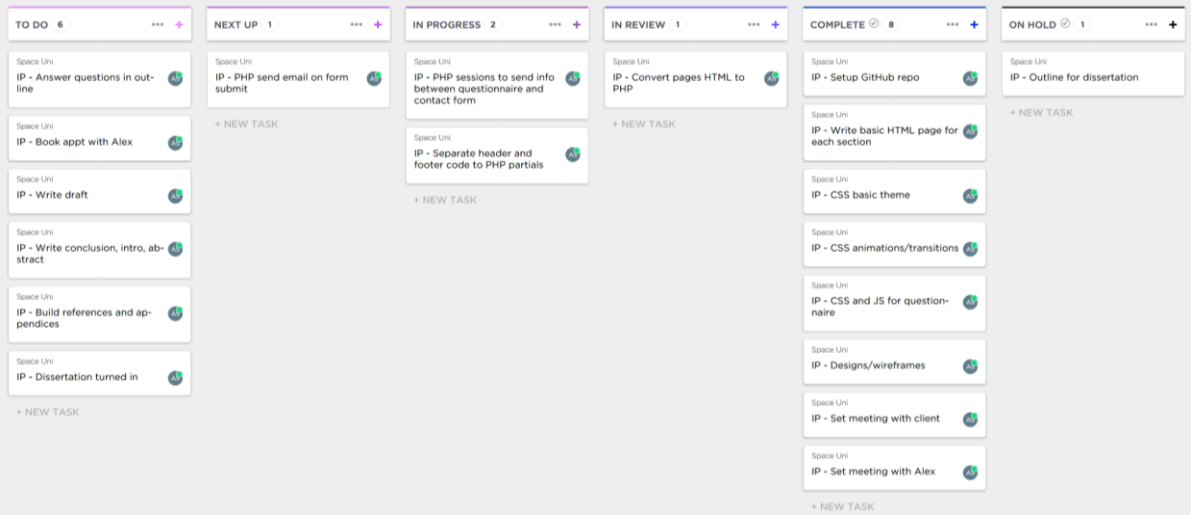
APPENDIX K – KANBAN BOARD

Created using Clickup.



APPENDIX L – QUESTIONNAIRE TEST DATA

In order from left to right, each column is as follows:

- Has the individual had surgery before? (All answers are 'No' because there is no testing needed for 'Yes')
- What is the individual's height in feet and inches?
- What is the individual's weight in lbs?
- Does the individual have pre-existing obesity related medical conditions?
- What is the expected outcome of this data? (Eligible for a consultation or ineligible based on BMI criteria)
- Three columns of results of testing this data after changes have been made to the script

Surgery before?	Height	Weight	Conditions?	Expected Elig.	Result 1	Result 2	Result 3
No	4'6"	100	No	No	No	No	No
No	4'6"	145	No	No	Null	No	No
No	4'6"	180	No	Yes	Yes	Yes	Yes
No	4'6"	100	Yes	No	No	No	No
No	4'6"	145	Yes	Yes	Null	No	Yes
No	4'6"	180	Yes	Yes	Yes	Yes	Yes
No	5'	130	No	No	No	No	No
No	5'	180	No	No	Null	No	No
No	5'	205	No	Yes	Yes	Yes	Yes
No	5'	130	Yes	No	No	No	No
No	5'	180	Yes	Yes	Null	No	Yes
No	5'	205	Yes	Yes	Yes	Yes	Yes
No	5'6"	150	No	No	No	No	No
No	5'6"	220	No	No	Null	No	No
No	5'6"	250	No	Yes	Yes	Yes	Yes
No	5'6"	150	Yes	No	No	No	No
No	5'6"	220	Yes	Yes	Null	No	Yes
No	5'6"	250	Yes	Yes	Yes	Yes	Yes
No	6'	160	No	No	No	No	No
No	6'	260	No	No	Null	No	No
No	6'	300	No	Yes	Yes	Yes	Yes
No	6'	160	Yes	No	No	No	No
No	6'	260	Yes	Yes	Null	No	Yes
No	6'	300	Yes	Yes	Yes	Yes	Yes
No	6'6"	180	No	No	No	No	No
No	6'6"	300	No	No	Null	No	No
No	6'6"	350	No	Yes	Yes	Yes	Yes
No	6'6"	180	Yes	No	No	No	No
No	6'6"	300	Yes	Yes	Null	No	Yes
No	6'6"	350	Yes	Yes	Yes	Yes	Yes

APPENDIX M – USER GUIDE

Using the sitemap below, users can find what pages they need starting with the navigation bar in the header. Hovering over each tab will reveal a list of pages nested within that section. To find the privacy policy, scroll to the bottom of the page and click ‘Privacy Policy’ in the footer. To return to the home page, click the AdventHealth logo in either the header or the footer.

Sitemap:

- Home
- About
    - Procedures
        - Laparoscopic Duodenal Switch
        - Laparoscopic RNY Gastric Bypass
        - Laparoscopic Sleeve Gastrectomy
    - The Hospital
    - Meet Dr. Smith
- Resources
    - Patient Stories
    - Pre- and Post-op Resources
        - Preparing for your Operation
        - Post-Operation Recovery
        - Post-Operation Weight Management
    - Video Gallery
        - Procedural Videos
        - Educational Videos
        - Interviews with Dr. Smith
    - Blog
- Start Here (Questionnaire and Contact Form)
- Privacy Policy