Proposal

The healthcare sector is one of great importance and is a sector that is vital in the development of a society because of this it is not a surprise that a lot of time and innovation is dedicated in the development of sector. As a result of this the healthcare sector has throughout time seen a gradual yet steep increase in its quality this is especially true in western societies. One change that the sector has seen recently is due to the introduction of the pandemic it has urged the inauguration of a more tech friendly service. This could be in the form of websites or apps. An example of this is the NHS app that was launched during the height of the pandemic. This was used in order to better inform the population.

In this digital age it is clear that people are more reliant of the internet and their devices hen ever and this can easily be advantageous to the healthcare industry as it allows the customers to access your services in a few seconds from wherever they are therefore in the case of an emergency or the interest in something there is readily available information to be access to help the user. In addition to this it can also benefit the companies as network traffic and the number of app users can generate revenue that can help fund or possibly even generate profit from business ventures.

**User clients’ needs**

One user need is that there is accurate weather forecasting this is a need as the if the data and advice isn’t accurate then it would mean that there is a chance that people are putting themselves at risk as your information is misleading and in the case of health small changes can be very impactful. It can also result in users not trusting your advice and not adopting your website meaning that it would be labelled a failure. Another user requirement is having access to a dashboard that displays data regarding air quality. This is useful as it means that the user would be able to constantly monitor the quality of the surrounding air. This dashboard would be simple and easy to navigate and grasp by both a technical and non-technical audience. Another requirement is that there is advice given to you regarding health matters that are affected by the weather. These might be seasonal allergies or matters like asthma. If you have these conditions this feature is has a great significance as it allows you to plan your activities and journeys in your own way.

The client needs are examples of things that the important however is not necessarily something that the user is interested in these can vary in significance but mostly must be accounted for. An example of a client need is following the rules and guidelines. This is vital as if these aren’t followed then it can mean that you are faced with heavy implication resulting in you mostly being fined or reprimanded in other ways. One other client requirement is the security of the website this is important as if the websites security isn’t up to par, then it will usually mean that a hacker would easily be able to gain unauthorised access to the database. This would mean that there would be a great loss in customers as they wouldn’t see you as trustworthy and once again results in fines.

**Current problems**

**Solution**

To begin with there would be a homepage that gives has the logo and name of the website and company. The navigation bar would have the options to traverse to the pages titled Home Page, About Us, Our Services, Why Us, Login and the Weather Dashboard.

The Homepage will start off with the navigation bar that is on the left side of the top of the screen. Then next to this on the top right of the screen is login button that redirects you to a login page when pressed. Under the navigation bar there will be an image depicting someone becoming unwell or suffering due to the weather. Then under this image there will be a paragraph or two describing the purview of what the company is and what it values. Under this it will have a title labelled services. This is where we have a paragraph or as many as you need to describe the different things that the user can do while using your website. This would be something regarding health for a paragraph briefly talking about how the weather and how it can affect our health. Next up there will be a section with the heading about us where you talk about your vision and why you feel

**Accessibility**

It is important to make your website accessible to as many people as possible one way to do this is to have resizable text sizes. This is important as it will mean that people who are visually impaired would have an easier time using your website. This is vital to appeal to this audience as it is very large. Examples of people who would fall in this category are obviously people with glasses who needed a prescription. It also includes people who aren’t very tech friendly like the older generation as their eyesight isn’t great and they need large text size to look at otherwise they would struggle to identify what they need to.

Another set of people to ensure your website is accessible to is the more non-technical audience otherwise known as the uninformed audience. To accommodate to these people, it would go a long way to not use much technical language as these will fall into deaf ears as they will simply be overwhelmed and might lead then to click off. Another way to help then visualise what you are speaking about is to use many images to help make them put an image into their mind this will make it easier for them to understand.

**Risk Mitigation**

One risk that needs to mitigated is the security of the website. This is a major risk as it can render the website a nuisance if hackers are able to gain access and leak user’s data. The way we will mitigate this is by using a range of different methods. One of these ways would be to employ white hat hackers. These hackers would be good at identifying and weak points the website has and helps us to patch up these vulnerabilities and make sure that they can’t be used for malicious intent. Another way would be to employ regular patches and updates to the system to ensure that if anything vulnerabilities or bugs make themselves known then they can be fixed before they become any larger then they need to be. Another thing that can test your website security is malware that hackers may try and implement into your website. With malware it is vital to catch a whiff of it before it caused to much damage as search engines like chrome will identify that your website is potentially infected and prompt the user with a warning before entering the website or in some cases completely denying access to your website because of a fear of infection. To avoid this, you need to always make sure that you have the best security measures and ensure that they are all up to date. These security measures would be as from a firewall all the way to having secure passwords and making sure that your prompt all users to make a secure password when creating an account.

Another risk is the fact that the website must fall under all of the legal guidelines and requirements. This is important as if it isn’t up to the quality it needs to be then it will fine and possibly threaten with being taken down if it doesn’t comply. Depending on the severity it can even result in prison time. These guidelines are also in place to help both the users and the company. One guideline is in place to implore you to make your website with people with limitations in mind. This is helpful to you as it allows you to include everyone as it may recommend that you include subtitles in your videos. This would be appreciated by people who are deaf. Another thing that you can do is use colour blind friendly shades when designing your website so people who suffer from colour blindness can differentiate between the different sections of your website.

Another risk that needs to be addressed is that of human error. In particular accidental file deletion. This can be done very easily and can be done at any time as humans are prone to making mistakes and this is an easy one to make. However, there are many ways to mitigate this. One example is to always have duplicates of all files especially the crucial ones. This will mean that you would never have an issue with this as if a file is deleted you would always have a back-up so you can simply replace it with the back-up and create a new duplicate. Another way to prevent this is to have user restrictions so only a selected few are even able to access the files that are most important. This will decrease the likeliness of accidental deletion as there would simply be less people who have a chance to do it.

**Guidelines to follow**

The first set of rules that you need to follow is GDPR (General Data Protection Act). This act is the cornerstone of laws and should be the bread and butter for all websites. One thing you need to ensure that you aren’t doing is having devices containing users’ data being lost or stolen. These devices need to be kept safe and preferably under a lock and key. This is because it might not be the people in charges fault as it is likely to be employees who are either malicious and get the device removed with intent or an ignorant employee that simply loses the device or leaves it somewhere that it is vulnerable. Another characteristic to follow is to ensure that your there isn’t a third party with unauthorised access to your or the users’ data. This is vital as if this is the breached then you can be fined up to £500,000 this is enough to shut the majority of small businesses down as they would have to liquidate to many assets to keep the website running.

The next guideline to follow is WCAG (Web Content Accessibility Guidelines). This is in place to ensure that people who are suffer from limitations are still able to use the website these would include visual, auditory, physical, speech, cognitive, language, learning, and neurological disabilities. One consequence of ignoring this would result in your website being prone to many lawsuits as people can sue you because they feel that they have not been accommodated for. These lawsuits can result in costing you up to $25,000 even if you reach a settlement. Another consequence of not following it would mean that you would lose users as if you ignore the accessibility guidelines then you would simply lose customers as there is a smaller target audience available.

**Functional and Non-functional requirements**

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| No. | Functional Requirement | Importance | Explanation |
| 1. | Provide accurate information regarding the weather and environmental health conditions and seasonal allergies | HIGH | This is a high priority as this information is what the user would be looking for. |
| 2. | The website should be easy to navigate | HIGH | This is vital as it takes the user only a few seconds before they decide whether or not they want to proceed with your website and if it is hard to navigate then it is easy for the user to give up and switch to another website. |
| 3. | Provide a service for users where they can ask questions and have them answered | MEDUIM | This is important as it allows the user to quickly gain access to the information they require and therefore waste little time |
| 4. | Provide a service that allows the users to sign up and receive a weekly newsletter regarding the latest news related to environmental health | MEDUIM | This is not as important as some of the others however it is also very helpful and something that I personally feel would be appreciated and increase users signing up. |
| 25. | Provide a forum or a discussion board where users can connect and share news with each other. | MEDUIM | This is again a feature that isn’t as important as others yet still deserves a place as providing a place like this would heavily increase the quality of the users experience as they can help each other and generally help build a loyal community |
| 6. | Provide the suggestion of tools or resources that would reduce their exposure to environmental hazards. | LOW | This is not as important as the other requirements as it is not expected for you to sell these items however it also would be handy for the user if you suggest items. |
| 7. | Should have a search button feature that allows users to find relevant information. | LOW | This is a low priority as compared to the others it isn’t completely necessary as all the information is available and accessible while traversing the website. |

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| No. | Non - Functional Requirement | Importance | Reason |
| 1. | The website must have a good response time and generally be user friendly | HIGH | This is important as if the website is slow and unresponsive the user is more then likely to click off |
| 2. | The website must be secure when it comes to the user’s data and personal information. | HIGH | If there is a security breach and data is leaked it is usually massively impactful as many users will simply stop using your website and you will gain an unwanted reputation. |
| 3. | The website should have plans and assurances in place in case of a failure with the website or database. This could be a backup database that stores all of the user’s personal information. | HIGH | This once again is a high priority as if it data is not backed up it can result in massive consequences that could likely end up shutting your operation down as you have to deal with the outrage of people who have lost all of their data, the consequences of the fines and also the fact that you have no more data to inform any decisions you need to make. |
| 4. | The website must comply with all of the guidelines and laws placed on websites this could fall under security all the way to ensuring it accessible to people with limitations. | HIGH | This is one of the most important requirements as it is vital that you follow these otherwise you will likely be met with fines and this also massively hurts your reputation and can cause massive issues. |
| 5. | The website needs to be regularly checked and updated in order to decrease the likeliness of a user finding a bug or a hacker finding a vulnerability. | HIGH | This is important as if your website is full of bugs and issues it will almost certainly result in the user regarding your website as untrustworthy and unsecure and will click of. |
| 6. | The language that is used in the website must be concise and able to be interpreted and understood by both a technical and non-technical audience. | MEDUIM | This is important however it isn’t as vital as some of the other requirements. As it swings both ways if the language is overbearingly non – technical it would put of some as they would think it isn’t technical enough however if someone who is not as technical as others and they see too much words they can’t understand it could either put them off or make them feel that this website is that of a high level and they would want to use it more. |
| 7. | The search engine should provide results ranked in order of relevance this can be done with the number of matching keywords | LOW | This again is not vital as it is part of a feature that in truth doesn’t change much it simply saves a few seconds. |

User acceptance testing

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| Number | User acceptance test |
| 1. | The website must accurately provide current weather conditions, forecasts, and alerts for the user's specified location. |
| 2. | The website must have a user-friendly interface that is easy to navigate and access information. |
| 3. | The website must provide information on seasonal allergies, including pollen counts, allergy triggers, and tips for managing allergies. |
| 4. | The website must be regularly updated with the most recent weather data and allergy information. |
| 5. | The website must be accessible on multiple devices, including desktop computers, tablets, and smartphones. |
| 6. | The website must have clear and concise instructions for users on how to access and interpret the weather and allergy information provided. |
| 7. | The website must be secure and protect user privacy, particularly in regards to location data. |
| 8. | The website should have a feedback mechanism for users to report any issues or provide suggestions for improvement. |
| 9. | The website should have a search function that allows users to easily find specific weather and allergy information. |
| 10. | The website should have a disclaimer stating that the information provided is for general informational purposes only and should not be used as a substitute for professional medical advice. |

**KPI’S**

1)

Unique Visitors: Measure the number of individual visitors to the website to gauge overall website traffic and this can be used to see the effectiveness of certain strategies for example putting an add somewhere you can track the increase of traffic and help inform decisions.

2)  
Pageviews: Track the total number of pages visited on the website to understand user engagement. This can be used to see what pages you need to concentrate on as there is no point in putting a lot of time and money on a page that isn’t getting much use. This can also be used to identify where is the best place to advertise your bestselling features.

3)  
Bounce Rate: Monitor the percentage of visitors who navigate away from the website after viewing only one page. A high bounce rate may indicate ineffective content or user experience. This can be used to see how good your homepage is and if it needs to be improved on as if there is a high bounce rate then you need to improve the homepage as it isn’t good enough to keep the user interested.

4)

Average Session Duration: Measure the average time users spend on the website to assess user engagement and content relevance. This can be used so you know what pages the users simply skip over and allows you to consolidate all of your effort into the pages that are being viewed the most and identify pages that are being glossed over and can be used to test why that is the case.

5)

Click-through Rate (CTR): Analyse the percentage of users who click on specific links or calls-to-action on the website, such as signing up for alerts or accessing detailed weather forecasts. This can be used to identify the relevance of the hyperlinks in the eyes of the user. Therefore, you are able to change hyperlinks in order to try and increase the rate or edit your more lucrative links in order to emulate the more successful ones.

6)

Conversion Rate: Track the percentage of visitors who complete a desired action on the website, such as subscribing to a premium weather service or purchasing weather-related products. This can be good to actually identify the quality of your website as it doesn’t matter who clicks on your website if no one is using the services, this can also help value your website.

7)

User Satisfaction: Conduct surveys or gather feedback from users to assess their satisfaction with the website's weather forecasts and health advice. This is vital as feedback is what informs your decisions the most as you need to appeal to your audience and this is one of the many ways to get a good idea of what the customers want.

8)

Return Visitors: Monitor the percentage of users who return to the website regularly for weather updates and health recommendations. This indicates user loyalty and the website's ability to retain visitors. This can be useful as you can reward loyal users by granting them access to features that are exclusive. This can help to gain a loyal group of people of users which should increase as you can reward them for introducing new users and so forth.