

T LEVEL

***Technical Qualification in
Digital Production, Design
and Development***

Grade Standard Exemplification

Materials Summer 2023

Occupational Specialism:

Digital Production,

Design and Development

Pass Version 1.0



Content

Introduction	page 2
Task 1 Activity A(ii): The Proposal	pages 3-6
Task 1 Activity B: The Visual/Interface Design	pages 7-9
Task 1 B Algorithm Design	pages 10-11
Task 1 Part B The Data Requirements	pages 12-13
Task 1 Activity B The Design Test Strategy	pages 14-15
Task 2: Developing the Solution	page 16-18
Task 3 Part A: Gathering Feedback to Inform Future Development	pages 19-22
Task 3 Part B: Evaluating Feedback to Inform Future Development	page 23-26
Learner work	page 27-77

Introduction

The assessment for the Occupational Specialism in Digital Production, Design and Development is based around a scenario-based project. The scenario was to develop a digital solution for a tutoring company.

Students completed the assessment in 87 hours of supervised sessions spread over a period covering 14 weeks. The assessment is split into four tasks covering a range of topics. These are summarised below:

Task	Topic	Evidence	Time
1	Analysing the problem and designing a solution	Proposal of the designed solution and a set of design documents	20 hours
2	Developing the solution	Prototype, development documents, test log and code for prototype solution	30 hours
3a	Gathering feedback to inform future development	Plan and report on gathering feedback	15 hours 30 minutes
3b	Evaluating feedback to inform future development	Feedback evaluation report	2 hours

In the assessment for the Digital Production, Design and Development Occupational Specialism scenario it is expected that the student will demonstrate many of the pass performance characteristics detailed in the grade descriptors. However, borderline performance will demonstrate these characteristics less consistently. Some key aspects of performance include:

- comprehensive analysis of a problem showing a detailed and perceptive consideration of the factors, solving issues, and fixing obvious or less complex defects
- production of different versions of an artefact that will be primarily functional, efficient, and respond effectively to users
- effective and fluent use of technical language
- effective evaluative processes.

The portfolio selected for this report was assessed at distinction grade. This is the assessed grade of the portfolio as a whole and not the grade of each individual piece of work submitted as part of the portfolio. Comment will be made where the student work does not fully meet the Pass grade descriptors and will suggest the evidence that is not included and should have been included.

Task 1 Activity A(ii): The Proposal

Key performance indicators:

- The average amount of time users spends on the website
- Keeping track of the average amount of time users spend on Health Advice Group will give the clients an estimate of how well the website is coping in different circumstances
- How many users making accounts after clicking onto Health Advice Group
- Keeping track of this will allow the clients to see how many users are being lost from initial impressions of the website; if there are many users creating accounts then the initial impressions are good, if the users aren't creating accounts, then the initial impressions are bad. This will be feedback to the clients so they can make improvements.
- Employee productivity
- How many users use the customisable option when it comes to the design of the product
- It's important for Health Advice Group to keep track of this because they're able to see how effective this feature having, it also shows them if changes are needed.
- If features are popular (if having a personal health tracker is popular) It is important to keep track of this because you as the client can see if it is worth the money to keep this a feature. From this, Health Advice Group can see what is in high demand at that time.

Functional requirements:

The parts of the product that the user will see and interact with

No.	Features	Priority	Justification
1.	Log-in feature	HIGH	Users will be restricted to certain functions if they aren't able to sign into Health Advice Group, they won't get the full experience of the digital solution.
2.	Send through an email for confirmation of account being made	LOW	This is to check that the system has the correct credentials for the user.
3.	Users can sign up	HIGH	The users won't have access to all the features of the website if they aren't able to log in.

Non-functional requirements:

Requirements of the product that make it run effectively

No.	Features	Priority	Justification
1.	Use of cookies	MEDIUM	Cookies allow users to be always logged into their account, the use of cookies isn't a high priority because the user can always log back into the system. This is good for frequent users of the software. The use of cookies also allows our clients to keep track and make personalised adverts to the users.
2.	Performance of the software	HIGH	Performance is a high priority indicator, performance has an impact on users experience and digital customer journey. A high-performing website will help my client reduce bounce rate and improve visitor retention.
3.	Website capacity	HIGH	Website capacity is a key indicator to test when creating a digital solution, load and stress testing will be done at the end of the project of Health Advice Group. If the website can't attract a large number of users at the same time then it will crash.

4.	Users' details (personal data is secure)	HIGH	Users should be able to trust the service Health Advice Group is offering, or they will not use the service.
5.	Website being always available	HIGH	The website can lose traffic if it's not available when the user needs it, the user may go to a different website if this one isn't available to them.
6.	Colour scheme is appropriate for a user	HIGH	User accessibility is important and if the user can't see the website, then the service won't be of use to them.

Guidelines and legal requirements :

The Data Protection Act will be considered when I create my digital solution for Health Advice Group. The Data Protection Act empowers individuals to take control of their personal data. Health Advice Group must explicitly disclose that they are collecting users' personal data. Health Advice Group must inform each individual user about how, why, and where they process and store users' data. Users have a right to ask for copies of the data collected from them. Users also have the right to ask companies to swipe the data they have collected on that user.

Lead Examiner Commentary:

Proposal Assessment:

The proposal outlines challenges and offers methodical decomposition, alignment with client/user needs, proactive risk strategies, and an understanding of regulatory standards. Some areas, such as problem breakdown and niche requirements, could be refined. The student's approach is laudable, setting a constructive trajectory for subsequent phases.

Justifications Review:

The justification for solution alignment exhibits a basic grasp of client and user needs but could benefit from a more detailed rationale to validate the solution's effectiveness. The risk mitigation explanations, although present, need more profound elaboration to demonstrate thorough preparedness. Similarly, while the proposal recognises software and industry standards, a more comprehensive justification would bolster its credibility.

Conclusion:

The student has laid a foundation, showcasing understanding and effort. However, more in-depth reasoning and detail are necessary to convince stakeholders and ensure the proposal's robustness. Enhancements in these areas would significantly elevate the proposal's overall impact.

Functional and Non-Functional Requirements:

The proposal offers rudimentary definitions of both functional and non-functional requirements. It lays down the essential groundwork, differentiating between what the software is supposed to do (functional) and how it should perform or the conditions it should meet (non-functional). However, the definitions could benefit from more depth to capture the nuances and complexities associated with each.

Key Performance Indicators (KPIs):

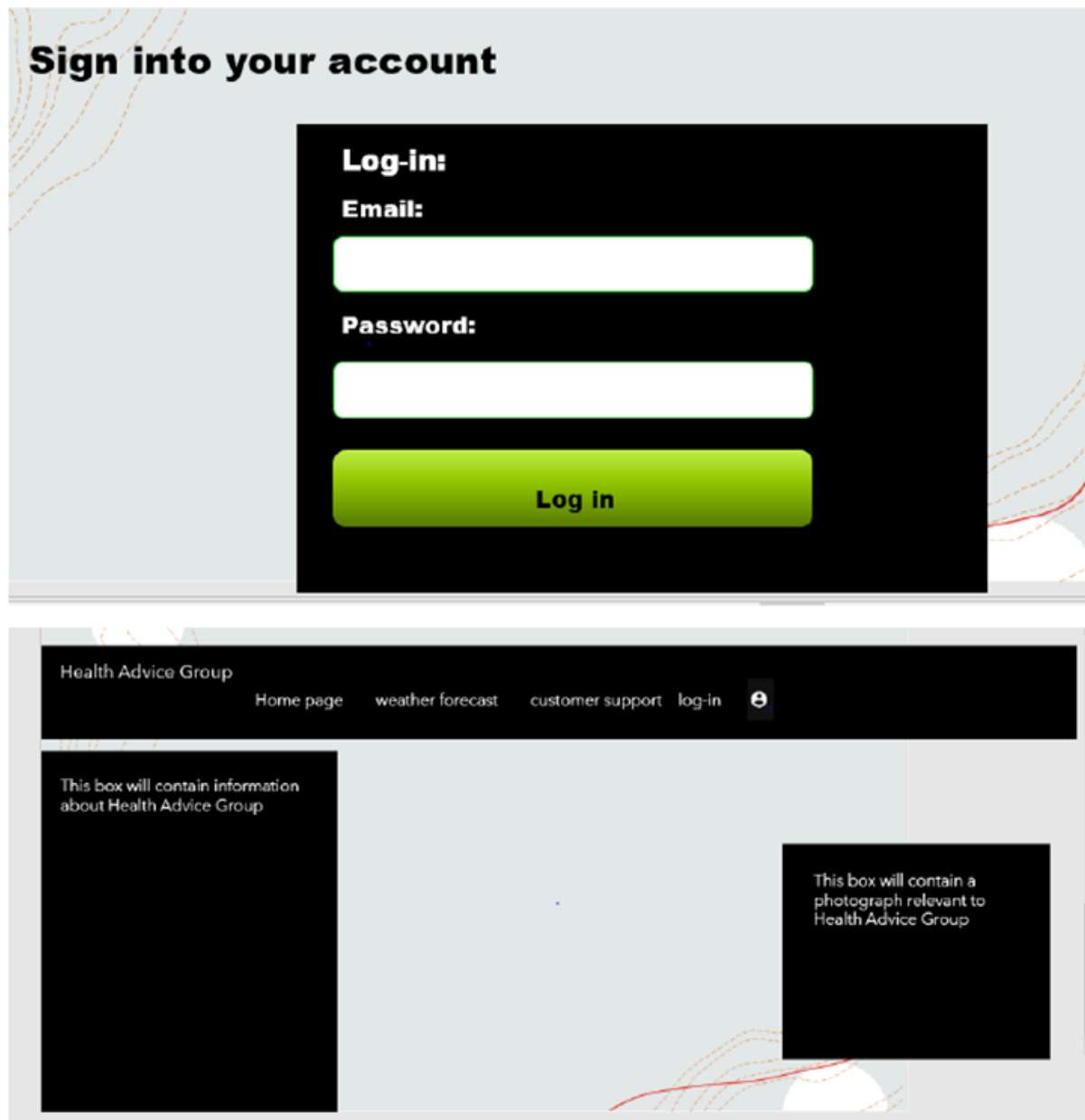
There is a basic explanation of key performance indicators provided in the proposal. The student highlights the concept that KPIs are metrics used to evaluate the success of an activity or process. While the introductory definition serves its purpose, further elaboration on how these KPIs relate specifically to the project at hand would be advantageous.

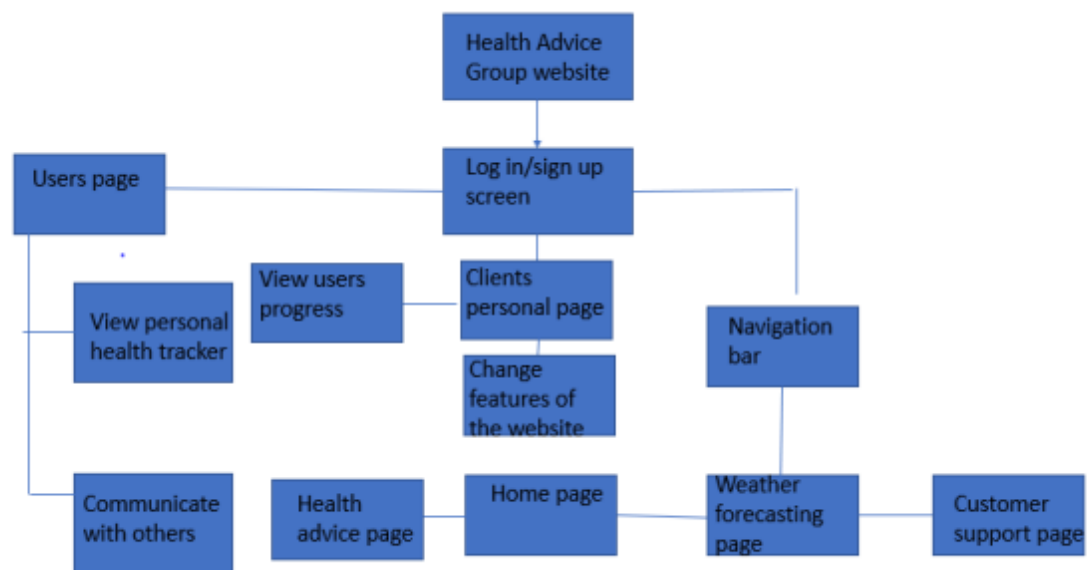
User Acceptance Criteria:

The proposal introduces the concept of user acceptance criteria as standards the software must meet for the user to accept it. The definition, though essential, offers an insight into the parameters that will be used to judge the software's success from a user's perspective. A more detailed breakdown, possibly with examples, would make this section more impactful.

Task 1 Activity B: The Design – The Visual/Interface Design

Student Evidence Review:





Lead Examiner Commentary:

Layout and White Space:

The design interface proposed demonstrates a good understanding of layout and the use of white space. The design doesn't feel crowded, and there is a reasonable effort made to give elements enough room to breathe. Although the white space is not perfect, it generally helps improve readability and reduce visual clutter.

Visual Hierarchies:

The design attempts to establish visual hierarchies by making essential elements more prominent and guiding the user's attention with a visible flow. While the hierarchy could be more pronounced in certain places, the basic principles have been applied.

Common Conventions:

The interface follows familiar conventions for intuitive use, incorporating recognisable symbols, placements and patterns. While not groundbreaking, it meets the basic requirements.

Conclusion:

Based on the student's work, it is evident that they have a reasonable understanding of fundamental design principles. The interface layout, visual hierarchy and standard conventions are reasonably practical, resulting in a

satisfactory overall design. Although there is always room for improvement and innovation, the design meets its intended purpose and basic user expectations.

Task 1 Activity B: The Design – Algorithm Design

Student Evidence Review:

I will be creating pseudocode for a user entering a correct password when creating an account with Health Advice Group, this pseudocode will be a continuation of the flowchart I created.

START

INPUT password AS A STRING FROM KEYBOARD

IF password == 7 or more THEN

SEND 'Password valid to this point' TO DISPLAY

ELSE

SEND 'Please enter a valid password'

END IF

IF char IN password == upper case

SEND 'Password valid to this point' TO DISPLAY

ELSE

SEND 'Your password must contain 1 upper case character to be validated.' TO DISPLAY

END IF

SEND 'Your password must contain 1 upper case character to be validated' TO DISPLAY

END IF

IF

IF password CONTAINS an INTEGER

SEND 'Password accepted' TO DISPLAY

ELSE

SEND 'Your password must contain a number or special character'

END IF

IF all requirements are met

DISPLAY 'Your password has been accepted, please enter your password again to ensure it matches.'

END

Lead Examiner Commentary:

Precise Logic:

The algorithms use precise logic, indicating an understanding of the core problem and required logic.

Structure and Sequence:

The algorithms exhibit an appropriate structure, with actions sequenced logically. However, there might be potential improvements to be made in terms of efficiency. The algorithms work, but they need to do so in a more streamlined or optimised manner. Students must also think about useful algorithms other than the standard ones, like log-in or registration forms.

Use of Accepted Conventions:

The student has primarily followed established standards in problem-solving and algorithm development. Adherence to such standards can improve tracking and potentially enhance the students work. While occasional deviations or unconventional choices may exist, most of the work aligns with conventional practices.

In Conclusion:

The student's work is satisfactory in breaking down the identified problems and creating algorithms to solve them. While the logic and structure are mostly accurate and suitable, there is a scope for improvement in algorithmic efficiency. Although it is primarily practical, following conventions consistently could lead to better results.

Task 1 Activity B: The Design – The Data Requirements

Student Evidence Review:

Data requirements

Data requirements for logging into Health Advice Groups digital solution using an email and password

Variable name	Function	Data type	Reasoning
\$isemailvalid	To determine if the email entered is valid(true) invalid(false)	Boolean	The email entered will either be valid or invalid.
\$atindex	As a form of validation, to ensure that the email entered has all the correct characters.	String	Say for instance, the @ is not used then the system will produce an invalid email sign
\$domain	This is to do a length check on the domain of the email	string	This assigns the whole email to a variable
\$local	To assign the part of the email before the @ sign to a	String	This helps validate the first part of the email

Lead Examiner Commentary:

Variables:

The student has primarily identified appropriate variables necessary for the proposed solution. These variables are relevant to the problem and contribute to the solution's function.

Data Structures:

Data structures are mainly apt. The student understands the importance of organising data for efficient access and modification, even if there is potential for refining or optimising some choices.

Data Types:

The chosen data types mostly fit the managed data. This shows a foundational understanding of how different data types should be handled and stored.

Naming Conventions:

While the naming conventions used in the proposal are mostly appropriate, making it easy to understand the purpose and function of variables, data structures and data types, there are inconsistencies. These inconsistencies could lead to clarity or interpretation issues in later stages of development.

Error Handling Procedures:

The student has identified error handling procedures, showcasing an awareness of potential pitfalls and disruptions in the proposed solution's operation. However, these procedures only cover some of the inputs/processes. Addressing error handling more comprehensively further bolsters the proposal's robustness.

In Conclusion:

The student's work in understanding and detailing data requirements for the proposed solution is commendable. Most choices regarding variables, data structures and data types are appropriate. However, more consistent naming conventions and a comprehensive approach to error handling would elevate the proposal's quality and effectiveness.

Task 1 Activity B: The Design – The Test Strategy

Student Evidence Review:

Test strategy

I'm going to be using black box testing and white box testing when creating my digital solution. I will be using black box testing where the inputs and outputs of the website, I will be using white box testing to test the backend/internal structure of the website.

Test strategy	Black box testing
Purpose	This test strategy allows for visual representation of all the testing that can be devised for all inputs and outputs on the program making sure everything works as intended
Who performs the test	Me
Test data set	Every action/input and output will be recorded
Test criteria	To ensure the program outputs what's intended
When to test	Test when a section of the website is completed and the inputs and outputs need to be tested
Estimated time required	Each section of the website shouldn't take more than 30 minutes to test, this may vary due to the amount of inputs/outputs there are
Test outcome	The outcome of the inputs/outputs will be compared with the intended outcome, if they don't match then any improvements needed will be made.

Date of test	Component to be tested	Type of test to be carried out	Prerequisites and dependencies
	Login page: when the password doesn't meet the requirements of an	Black box testing	Need access to the internet for the website to work, input a valid

Lead Examiner Commentary:

Test Strategy Understanding:

The student has demonstrated a thorough understanding of how each solution component is interconnected, ensuring that modifications to one part do not adversely affect the others.

Order of Testing:

It is crucial to adhere to the outlined strategy as it encompasses the most critical dependencies and logical flow required for effective component testing.

Types of Tests Required:

The student has identified necessary tests for the solution, demonstrating an understanding of various testing layers and important aspects crucial to project success, although some may require further elaboration.

Techniques, Methods and Formats:

There is some effective use of appropriate techniques and methods in communicating the design. While only sometimes applied throughout, their instances provide clarity and aid understanding.

Technical Language:

The design employs technical language to ensure stakeholders can comprehend the nuances, but inconsistent use hinders accessibility in some sections.

Task 2: Developing the Solution

Student Evidence Review:

Code documentation

```
"""
ASGI config for health_advice_group project.

It exposes the ASGI callable as a module-level variable named ``application``.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/howto/deployment/asgi/
"""

import ...

os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'health_advice_group.settings')

application = get_asgi_application()
```

```
"""
Django settings for health_advice_group project.

Generated by 'django-admin startproject' using Django 4.1.7.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/4.1/ref/settings/
"""

from pathlib import Path

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent

# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/4.1/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = 'django-insecure-9_#uyl6n(!&@-2q1z+3j+qhn$nd6%i4hkz_9ro4!a1$a(-#9#q'

# SECURITY WARNING: don't run with debug turned on in production!
-----
```

Lead Examiner Commentary:

Multilingual Functionality:

The prototype showcases the student's versatility by implementing code in multiple languages. However, the code's efficiency needs improvement, and significant errors may affect the solution's overall performance.

Logic & Programming Structures:

The student has employed precise logic and programming structures that would lead to mainly correct outcomes. While the foundation is solid, there might be instances where the logic could be further refined for optimal results.

Naming Conventions:

The code follows appropriate naming conventions, although there is room for improvement in certain instances where naming could be more precise.

Logical Organisations:

Some organisation is evident in how the code is structured, but there might be areas where the flow could be more intuitive.

Informative Comments:

The student has incorporated comments, which aid in understanding the code's purpose. However, more consistent commenting would provide greater clarity for third-party developers.

Input Handling:

Adequate mechanisms have been implemented for user input, though there is room for improvement to ensure more seamless interaction.

Guidance and Error Messages:

The prototype provides user guidance and error messages, ensuring users aren't left entirely in the dark when issues arise. Yet, more comprehensive feedback could enhance user satisfaction.

Outputs:

The user receives results that provide feedback on their actions, even if there might be potential for a more engaging or informative display.

Accessibility, Compatibility, Legal and Ethical Considerations:

The prototype mostly adheres to essential standards and guidelines. This adherence ensures that many users can access and use the system. Legal and ethical considerations are also mostly met, though areas need more detailed attention.

Confidentiality, Integrity and Availability:

The student has applied procedures and security controls to ensure the system's confidentiality, integrity and availability. While these applications are primarily practical, continuous updates and refinements will be crucial for optimal security.

In Conclusion:

The prototype developed by the student demonstrates a firm grasp of coding in various programming languages, user experience design, and adherence to essential standards. However, there is room for improvement in code efficiency, user guidance and consistent application of measures. Further refinement in these areas can lead to a more polished product.

Task 3 Part A: Gathering Feedback to Inform Future Development

Health Advice Group feedback

Gathering feedback to inform future development, this survey is for non-technical users. You will be questioned about the functionality of my website. Thank you for your response!

Were you able to access Health Advice Groups website?

- ☒ Yes
- ☐ No
- ☐ Other: _____

Were you able to access customer support page?

- ☐ Yes
- ☒ No
- ☐ Other: _____

Health Advice Group feedback

Gathering feedback to inform future development, this is a technical survey. You will be questioned about the functionality of my website. Thank you for your response!

Were you able to access the server for Health Advice Group?

☒ Yes

☐ No

☐ Other: _____

Were you able to access the customer support page? What would you improve about my customer support page?

☐ Yes

☐ No

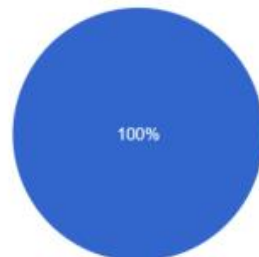
☒ Other:

I was able to access the customer support page, I wouldn't do anything to improve the customer support page.

Were you able to access the log-in page?

 Copy

3 responses



● Yes
● No

Were you able to sign up to Health Advice Group?

 Copy

3 responses



● Yes
● No

Lead Examiner Commentary:

Quality and Scope:

The feedback collection materials created by the student play a crucial role in evaluating the prototype's performance. However, these materials may only offer limited insights into different aspects of the prototype and may have a narrow scope, needing more detailed feedback.

Use of Tools:

The student's choice and use of tools to gather feedback indicate a basic understanding of the feedback process. The devices have effectively captured feedback that provides insight into the prototype's performance.

Evidence-Informed Iteration:

Based on the feedback collected, several opportunities exist to improve the prototype through evidence-based iteration. This indicates that the student is gathering feedback and considering utilising it to refine and enhance the prototype. Although the depth of these insights may be crucial, there is a clear emphasis on iterative development based on user or tester feedback.

In Conclusion:

The student's approach to feedback gathering and iterative development showcases an elementary understanding of the importance of user feedback in refining a prototype. The groundwork is set, capturing essential feedback and acting upon it. However, more comprehensive tools and methods for feedback collection, as well as a deeper dive into iterative refinement based on feedback, would enhance the overall development process.

Task 3 Part B: Evaluating Feedback to Inform Future Development

Student Evidence Review:

Evaluation of feedback

from the feedback I gathered about Health Advice Group, I have been able to figure out what I could do next in order to further develop my website. The first improvement I recognized when gathering feedback for Health Advice Group was the style of the website. All users recognized that Health Advice Groups website is bland, there wasn't any colour and all the information was blocked together. Therefore, in the future I will use a CSS file to change the style of Health Advice Group, I will add a function where users are also able to use dark or light mode. The next improvement I sought out when observing my technical and technical users is the functionality of Health Advice Group, all users said that the functionality of the website could be improved. This is something I have recognized and something I will be improving in the future. I will add a fully functioning navigation bar so users with accessibility issues are able to navigate Health Advice Group as well as making sure all the hyperlinks on each page, (Homepage, Customer support page, Weather support page etc.) fulfill their functions so the users are able to go back to any page they need. Another improvement to be made would be adding relevant information to my pages, I've realized that the information added to my pages isn't interesting to its users, I have a younger target audience for my website so I want to draw the attention. When making my observations, I realized that my users weren't able to find the 'Customer support page' through the website, the user had to enter the exact URL in order to find it. I will further develop this by adding a hyperlink to the navigation bar so users can easily find the Customer support page.

From the feedback I was also able to figure out that I shouldn't change the design or the functionality of the sign up/log-in page. The feedback showed me that the 5-minute sign-up period is perfect for any user. The 5-minute window gives the user enough time to log-into their email and confirm their email address

How well did my solution meet requirements?

When comparing my solution to the functional and non-functional requirements that I set out, I can see that I was successful with all functional requirements, my users are able to log-in, a confirmation email is sent out anytime a user signs up to Health Advice Group. Another functional requirement that was met was users being able to sign-up to Health Advice Group.

Some of my non-functional requirements weren't fulfilled however, the majority of the non-functional requirements were met. From my user's feedback, I know the performance of my website is up-to standard. All of my users have had a good experience when it comes to the performance of Health Advice Group. The website capacity was tested; Health Advice Group can't handle the amount of users that I wish to have on my website at one time so that is something I will be improving to further develop my digital solution.

When creating Health Advice Group, a big achievement for me was making Health Advice Group accessible at all times, this prevents any loss of data trafficking. The website having a fast response time was a non-functional requirement that was also met when creating Health Advice Group. The key takeaway for me here is that in the future when developing this website further is that I should put more focus on the functionality of the website as without that there isn't much the user to do other than just function the website.

As for how well my solutions meets the KPIs I can't check for some of them because the feature that is needed hasn't been added to the website yet. However, for long users usually spend on the website, I can't know for sure as most testing I got users to do involved them going through the website so there's no way for me to know how long user's retention is kept for on my website. I figured in the end that it takes about 15-20 minutes for users to look through my entire website.

Lead Examiner Commentary:

Appropriateness of Assets:

The student undertook a limited review of the chosen content, assessing the assets' suitability for the intended purpose.

Source Validity and Reliability:

There was a cursory examination of the sources for asset derivation. The student understood the significance of using valid and dependable sources but may benefit from a more thorough assessment.

Legal and Ethical Implications:

The review addressed the legal and ethical considerations of identified assets, acknowledging broader implications even at the surface level.

Cross-Source Consideration:

Occasionally, the review benefitted from superficial comparisons and corroboration across multiple sources. However, these moments could have been more consistent throughout the review.

Functional and Non-Functional Requirements:

The student evaluated how well the prototype aligns with the system's functioning and non-functional specifications.

KPIs and User Acceptance:

The evaluation extended to the prototype's adherence to key performance indicators and user acceptance criteria. This thorough assessment suggests that the student understands the importance of meeting benchmarks and user expectations.

Future Development Insights:

The student offered a basic and somewhat simplistic rationale for potential future iterations. While it provides a starting point, a deeper exploration of the prototype's strengths and weaknesses could lead to more profound insights for enhancement.

Use of Examples:

Selected examples occasionally support points made in the review and evaluation. While these give context to some claims, the breadth and depth of examples could be broadened for a more compelling argument.

Feedback Consideration:

The student considered feedback in their analysis, though integrating this feedback into the review was limited. A more detailed assimilation of user feedback would provide a richer perspective on potential improvements and validations.

In Conclusion:

The student's work in content review, prototype evaluation and future iteration planning displays foundational comprehension and analysis. While they demonstrated a good understanding in evaluating the prototype against set criteria, areas such as content source validation, rationale for future changes and more robust evidence support could benefit from further depth and consistency.

Data requirements

Data requirements for logging into Health Advice Groups digital solution using an email and password

Variable name	Function	Data type	Reasoning
\$isemailvalid	To determine if the email entered is valid(true) invalid(false)	Boolean	The email entered will either be valid or invalid.
\$atindex	As a form of validation, to ensure that the email entered has all the correct characters.	String	Say for instance, the @ is not used then the system will produce an invalid email sign
\$domain	This is to do a length check on the domain of the email	string	This assigns the whole email to a variable
\$local	To assign the part of the email before the @ sign to a	String	This helps validate the first part of the email

\$localLen	This counts the number of characteristics in the \$local	String	This validates the length of the \$local
\$domainLen	Counts the number of characteristics in the domain	String	To validate the length of the domain

.

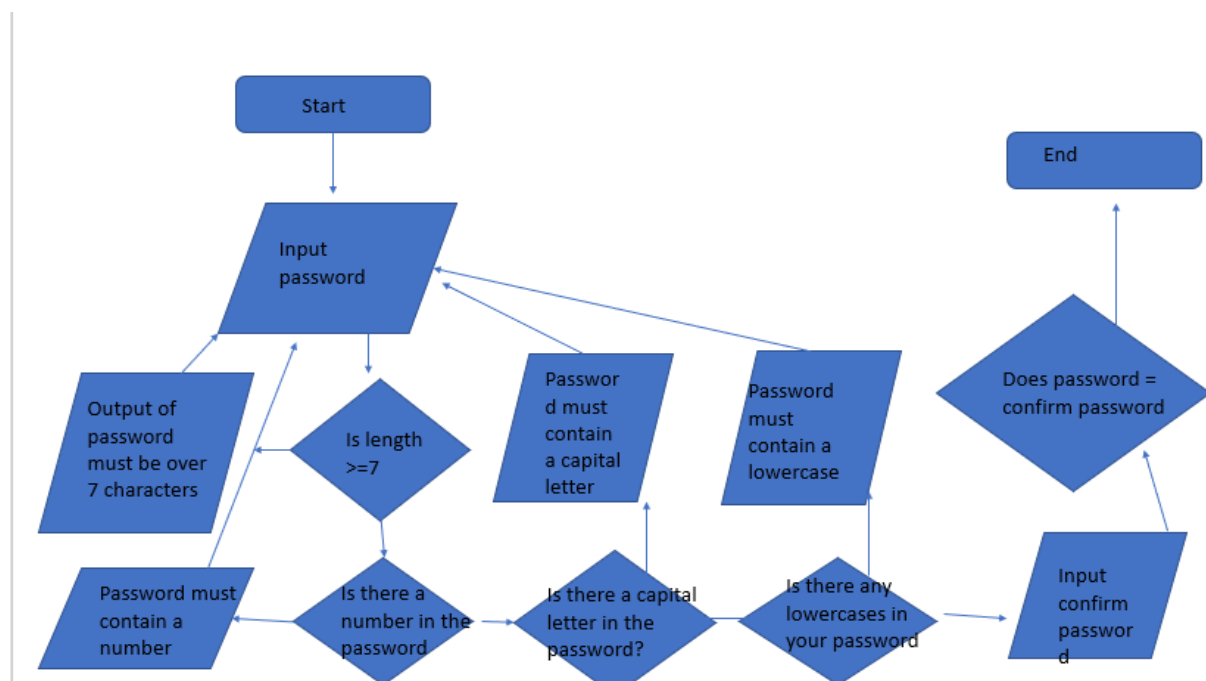
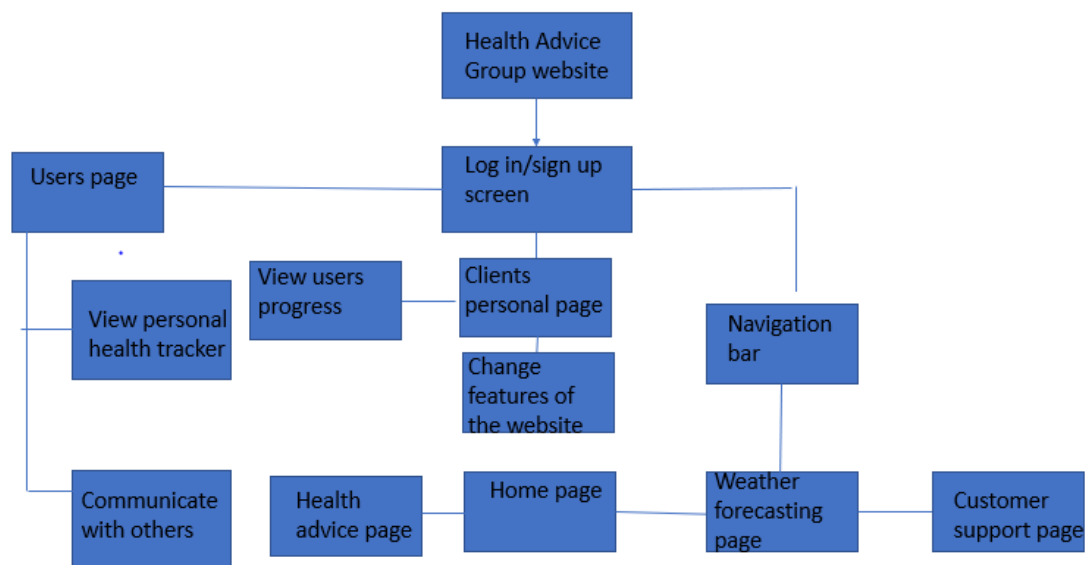
\$password	This is where the user is assigned an input for a password to a variable	String	This allows for validation to the password
------------	--	--------	--

\$cpassword	Assigning the user's input to confirm password to a variable	String	This allows for validation of the password
-------------	--	--------	--

\$passwordErr	To output an invalid message when the validation of the password is not met	String	If there is an error within the password, then it outputs an error message
\$confirmErr	To output a message when confirmed password is checked against password	String	To output an error message when confirmed password doesn't match password
\$nameErr	To check if the field 'name' is filled out	String	To ensure that there is a present value
\$name	Assigns the input to the field 'name'	String	To assign a value to the variable name
\$surnameErr	To check if the field name	String	To ensure that there is a present value

Hierarchy diagram

This hierarchy diagram is to show the hierarchy between Health Advice Group and the users, the website consists of 4 pages which is shown, there is a health advice page, a weather forecasting page, a customer support page and a home page. These pages will be my main focus when creating my digital solution, this will ensure that I constantly meet requirements of the users.



Health Advice Groups digital solution will consist of 4 main pages: the homepage for all users, personal health tracker page, information to form health decisions about the weather, customer help support page to ensure users can get all the help they need. These pages will be my focus when

creating my website as they make up the most important features needed in order to meet the requirements of both the user and client. There are other features involved within the homepage of Health Advice Groups website that I will attempt to implement with the other pages of the website, one feature I will try to incorporate throughout the rest of the website is hyperlinks, these hyperlinks will always link back to the homepage. This is depending on if I have enough time after making the main 4 pages I have mentioned.

Occupational specialism

I currently work for a software development company. My company has secured a new contract to develop a digital solution for a charity called Health Advice Group. The charity offers information and support for environmental health issues that occur depending on the time of the year; some of the information Health Advice Group provide is:

- Health Advice Group provide information on how to deal with extreme weather temperatures

When dealing with extreme heat, to cool yourself down you should consume cold foods and drinks; this prevents the body from overheating. When dealing with extreme heat you should also avoid the consumption of alcohol, alcohol can cause Dizziness, Disorientation, Fatigue and impaired judgement. You should provide yourself with cold showers or put cold water directly on the skin or clothes. You should keep your living space cool, prevent opening your windows during the hottest points of the day.

- Health Advice Group provide Information on environmental health conditions and seasonal changes (e.g., asthma, and hay fever)

Environmental changes can cause health conditions such as asthma to become worse as seasons change, a wide range of indoor and outdoor allergens, irritants, as well as cold temperatures, can exacerbate asthma. Household exposure to dust mites and cockroach allergens all contribute to asthma morbidity.

Environmental changes can cause health conditions such as hay fever to worsen depending on the time of the year. Most people with hay fever are allergic to pollen, but it can also be caused by trees and weeds. Research suggests that pollution, such as cigarette smoke or car exhaust fumes, can make allergies worse.

- Risk assessments for home environments

Health Advice Group provides home risk assessments to ensure your home environment is safe when you have health conditions such as asthma. Exposure to things like asbestos can cause asthma to worsen.

Health Advice Group have requested me to develop a digital solution that provides:

- Weather forecasting to inform health decisions
- Access to a dashboard for monitoring air quality data
- Advice on how to deal with health matters affected by weather and environmental conditions

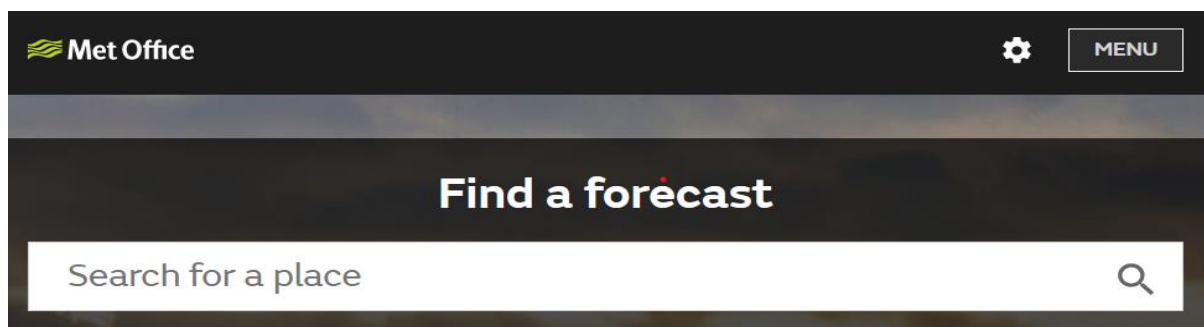
Health Advice Group has done some of their own market research to identify features that could potentially be included in the digital solution, the features are:

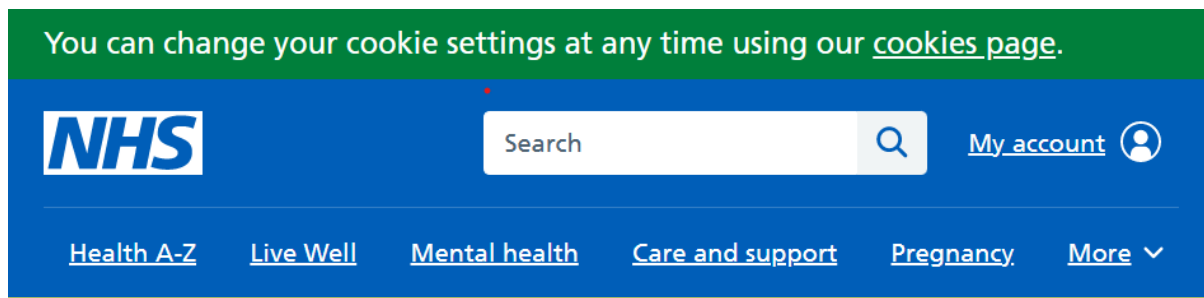
- Personalised health advice based on location
- Accessibility features to support a wide range of users needs
- A personal health tracking app

In preparation for developing a proposal for the digital solution, for Health Advice Group. I have been asked to carry out research. My research will consist of how digital solutions are used to meet the needs of different users within the health sector including:

- How hardware and software are used within the context of the industry
- Newly emerging technologies
- How digital solutions could be used to meet different user needs
- The industry-specific guidelines and regulations I will need to follow

To help with my research, I have found companies that offer similar services to Health Advice Group. These companies are The Met Office and the NHS. The Met Office offers a range of similar services to Health Advice Group, The Met Office gives educational information about dealing with extreme weather temperatures. The Met Office makes predictions across all timescales from weather forecasting climate change. Climate change is one reason for seasonal allergies becoming more common. The NHS provides information on how to deal with extreme temperatures and how to help with environmental health conditions.





During the design of Health Advice Groups digital solution, I will be taking into consideration the features available to users. The Met Office's website isn't accessible to all users, it can be hard for older people to navigate where they need to go in-order to get the information they are looking for. The NHS shows great accessibility when it comes to users' navigation the information they need, all categories are visible for easy use. The NHS has a visible log-in setting where (My account is) this is a perfect feature for part of Health Advice Groups digital solution. They wish for a personal health tracking tool, allowing the user to have an account means they can always have this information provided to them, instead of entering the information every time they are on the website.

System requirements

Operating systems for The Met Office and the NHS require Apple or Android smartphones with internet access and iOS or Android operating systems. (Versions iOS 12 and above, Android 5.0) when creating a digital solution for Health Advice Group, I will ensure that the operating system runs correctly on the right iOS and Android model.

Minimum requirements for downloading Health Advice Group, these requirements need to be met or the system won't run.

website System requirements

- Processor: 1 gigahertz (GHz) or faster processor or SoC
- RAM: 1 gigabyte (GB) for 32-bit or 2 GB for 64-bit
- Hard disk space: 16 GB for 32-bit OS 20 GB for 64-bit OS
- Graphics card: DirectX 9 or later with WDDM 1.0 driver
- Display: 800x600

Mobile device

- 1.3GHz dual-core processor
- 1GB of RAM
- iOS 6.1.4
- 1,440mAh battery

How is hardware and software used within the health and weather sector?

Medical hardware devices include a broad range of products, these products include thermometers, blood sugar metres, artificial hearts etc..

Thermometers are used within the weather sector to accurately measure the temperature outside. There is also another use for thermometers, thermometers are used within the health sector to accurately read the body temperature of both humans and animals. Thermometers allow for people to get the correct information on what they need to do (this is determined by the user's findings.)

Smart watches are used in both the weather and health sector. In our current day, you're able to look at your smartwatch to see the most up to date, current, and specific to your location weather forecast. Smartwatches have built-in sensors and/or software that updates through your phone's connection to provide you with instant information on what is happening with the weather in your region (where you are at that specific time.)

Smartwatches are used within the health sector to give alerts out when temperatures are too extreme. Smartwatches give Yellow, Amber and Red alerts depending on how extreme the weather is, with these warnings come some information on how to deal with the weather.

Newly emerging technologies

Artificial intelligence in healthcare refers to the complex algorithms designed to perform certain tasks within the health sector. When doctors inject data into computers, the newly built algorithms can review, interpret and suggest solutions to complex problems.

Artificial intelligence has been used with the weather sector to analyse data about weather and climate change for years. Scientists are slowly introducing artificial intelligence to create forecasts that are more accurate and further reaching. Artificial intelligence will allow for the users to get more accurate information and stay more educated about complex problems that can occur. artificial intelligence allows Health Advice Group to give the right information out to its users.

How digital solutions can be used to meet different users' needs

Understanding users and their needs is a huge requirement that needs to be met when creating a digital solution. When creating digital solutions there are criteria's that need to be marked off. Criteria 1: Understanding the user's needs, understanding your users' needs are important because if these needs are not met then the website is insufficient, Health Advice Group understanding as much as the context as they can give them the best chance at meeting the users' needs in a simple and cost-efficient way. Using digital technology to find the solution to a problem can be described as a digital solution, the problem and the solution are both in digital format. This can help users break complex problems down into more manageable parts. Criteria 2: make the digital solution accessible to the user. When a user uses a digital solution, they're able to change the font size, the colour of the background (this is for people who may have dyslexia). Users being able to change these things allows them to easily access the information they need.

- The industry-specific guidelines and regulations I will need to follow I will need to provide initial and ongoing training and support with my digital solution, before my digital solution is released, I will perform a user acceptance testing meeting to ensure all areas of the digital solution are working as they should, it also ensures that there is nothing missing from the digital solution. The head IT support team for Health Advice Group will be involved in this meeting.

I will then carry out training for employees of the Health Advice Group to ensure there are no problems and everyone understands how the new system works.

Focusing on users' digital skills and competences, accessibility to a big part about creating a digital solution, you must ensure that your target audience is able to use your digital solution. Having an older target audience may cause issues because they aren't used to certain digital solutions.

During accessibility I must think of the area my digital solution will be used, if my digital solution is being used in a less-educated area then I must use a low-skilled and low-literate user interface.

Activity A (ii)

Health Advice Group Proposal

The proposal/justification

Health Advice Group has requested me to create and develop a digital solution that provides:

- Weather forecasting to inform health decisions

- Access to dashboard for monitoring air quality data
- Advice on how to deal with health matters affected by weather and environmental conditions

Potential features that the clients would like to be included are:

- Personalised health advice based on location
- Accessibility features to support a wide range of users needs
- A personal health tracking tool

My solution for the client would be to create a website that provides users with the relevant information they're looking for; I would like my solution to be easily accessible to existing and potential users. My solution would be to create an easy-to-use place for the users to track their personal health. The website will allow users to keep track of their calorie intake, my website will give advice on how the user can improve their intake to improve their health. This website will have two options when logging into the website, the user will be able to log into the website or continue to use the website while not being logged in. Being able to have both options available is important. However, users that don't log-in won't have all features available to them. Once the user has logged on the website can be more tailored to what the user would be using it for.

The first page, the user will be taken to the home page of Health Advice Group. The home page will consist of a short brief of what Health Advice Group have to offer, the home page will have a variety of features, one main feature is hyperlinks leading to other pages of the website via a navigation bar. This page will display where all information is located so the user can easily navigate the website. At the bottom of each page, there will be a hyperlink leading back to the home page; this will help the user find their way back without any difficulty. I've come up with this solution after looking at a website called The Met Office and the NHS that can be seen in my appendix or in my source table. This is what I'm basing the look of my website on.

Another page of my website will only be accessible to people who have/create a log-in. By logging into Health Advice Group, the users have more access to the website. This allows the user to 'monitor their own personal health' the user can track things like their calorie intake, how the users should improve when working out, where they should be after a certain period of time. After the Health Advice Group gathers this information, they can give appropriate advice back to the user. Say for instance, they are behind in their workouts, Health Advice Group will give the user advice in order to meet their goal.

I got the idea of creating a feature like this from personal health tracking apps that are found in apple and android stores that can be seen in my appendix.

Health Advice Group could benefit from several features which I plan on including, to aid sufficient advice to the user, I will be including a feature where the user can add in their personalised location. This ensures the user gets appropriate advice on where they are located.

To ensure that my digital solution is completed on time, I will be using an agile methodology. By using an agile methodology, it reduces the amount of time it will take to complete my project, it also improves flexibility so I'm able to get the most prioritised tasks completed first. A negative impact on using an agile approach is that it can become overwhelming, and it is easy to fall off track because my work may become disorganised. To prevent this from happening, I will create a Gantt chart and check off my tasks as I complete them.

In-order to create my digital solution, I will be using Django. The reason for this is because Django is a high-level python web frame that enables rapid development of secure and maintainable websites. When using Django, I will get a visual representation of what my website will look like, if I would like to change the design of a feature, I'm able to do that.

Key performance indicators

- The average amount of time users spends on the website

Keeping track of the average amount of time users spend on Health Advice Group will give the clients an estimate of how well the website is coping in different circumstances

- How many users making accounts after clicking onto Health Advice Group

Keeping track of this will allow the clients to see how many users are being lost from initial impressions of the website; if there are many users creating accounts then the initial impressions are good, if the users aren't creating accounts, then the initial impressions are bad. This will be feedback to the clients so they can make improvements.

- Employee productivity
- How many users use the customisable option when it comes to the design of the product

It's important for Health Advice Group to keep track of this because they're able to see how effective this feature having, it also shows them if changes are needed.

- If features are popular (if having a personal health tracker is popular)

It is important to keep track of this because you as the client can see if it is worth the money to keep this a feature. From this, Health Advice Group can see what is in high demand at that time.

Client and user requirements

The table below is to show all the features/tasks the clients and users should be able to do throughout my website

Client	Users
<p>Clients will be able to:</p> <ul style="list-style-type: none">• Log into admin credentials• Receive any form of feedback from users• Change features within the digital solution• Update website• View users process• Get more detailed data on how well users are doing with their health progress• Change the text size or use text to speech for users that are academically challenged	<p>Users will be able to:</p> <ul style="list-style-type: none">• Log into Health Advice Groups domain• Access the website without logging in• View weather forecasting to inform health decisions• Customise their (the users) profile• Accessibility, being able to change features to suit the user• Change the text size or use text to speech• Add other users as friends so they can track each other's progress

Mitigation of potential risks

One potential risk that can occur is that the website could have glitches that weren't found during the testing of the digital solution, there could be issues for certain users when trying to access the website. This will be mitigated by having a customer support section where any potential problems the user has can be reported and then dealt with in a timely manner.

Another potential risk that can occur is missing features within the website or features being in the wrong place, this can cause issues for both the clients and users because it can cause the website to fail. This can be mitigated by having a user acceptance meeting with the clients to ensure all the features asked for are there.

A problem that can occur during the use of my digital solution is the website crashing due to the number of users using the website, this can cause problems because this will cause the entire website to crash, this can be mitigated by load and stress testing the website to ensure it can take a large amount of users at one time. This is an unlikely problem that will occur, but load/stress testing is an important part of understanding the website and its capacities.

A problem that can occur when creating a Health Advice Group is sensitive data being stolen, this can be detrimental to both user and client. This will be mitigated by installing and enabling firewalls, firewalls barricades that sit between a private internal network and the public internet. Users are advised not to log into Health Advice Group without a secure network (don't log-in using a public network.)

Acceptable user criteria

User story:
(Explain the purpose and process of the feature from the users' perspective)

Scenario

Starting point: Logging into Health Advice Groups digital solution

Given

What the user does: The user navigates to the login page

When

At what point in the process does this happen: The process happens once the user has navigated the login page

And

If anything, else is happening at that point: The user enters their Email/Username then enters their password. If the password or username is incorrect, then an invalid message will appear.

Then

The result of the previous steps: If the password and username is correct, the user will be directed to a personal account. The digital solution will still work without logging in, the only problem that can occur is that the user won't be able to access all the features the digital solution offers.

Functional requirements

The parts of the product that the user will see and interact with

No.	Features	Priority	Justification
1.	Log-in feature	HIGH	Users will be restricted to certain functions if they aren't able to sign into Health Advice Group, they won't get the full experience of the digital solution.

2.	Send through an email for confirmation of account being made	LOW	This is to check that the system has the correct credentials for the user.
3.	Users can sign up	HIGH	The users won't have access to all the features of the website if they aren't able to log in.

Non-functional requirements

Requirements of the product that make it run effectively

No.	Features	Priority	Justification
1.	Use of cookies	MEDIUM	Cookies allow users to be always logged into their account, the use of cookies isn't a high priority because the user can always log back into the system. This is good for frequent users of the software. The use of cookies also allows our clients to keep track and make personalised adverts to the users.
2.	Performance of the software	HIGH	Performance is a high priority indicator, performance has an impact on users experience and digital customer journey. A high-performing website will help my client reduce bounce rate and improve visitor retention.
3.	Website capacity	HIGH	Website capacity is a key indicator to test when creating a digital solution, load and stress testing will be done at the end of the project of Health Advice Group. If the website can't attract a large number of users at the same time then it will crash.
4.	Users' details (personal data is secure)	HIGH	Users should be able to trust the service Health Advice Group is offering, or they will not use the service.
5.	Website being always available	HIGH	The website can lose traffic if it's not available when the user needs it, the user may go to a different website if this one isn't available to them.

6.	Colour scheme is appropriate for a user	HIGH	User accessibility is important and if the user can't see the website, then the service won't be of use to them.
----	---	------	--

Guidelines and legal requirements

The Data Protection Act will be considered when I create my digital solution for Health Advice Group. The Data Protection Act empowers individuals to take control of their personal data. Health Advice Group must explicitly disclose that they are collecting users' personal data. Health Advice Group must inform each individual user about how, why, and where they process and store users' data. Users have a right to ask for copies of the data collected from them. Users also have the right to ask companies to delete the data they have collected on that user.

I will be creating pseudocode for a user entering a correct password when creating an account with Health Advice Group, this pseudocode will be a continuation of the flowchart I created.

START

INPUT password AS A STRING FROM KEYBOARD

IF password == 7 or more THEN

SEND 'Password valid to this point' TO DISPLAY

ELSE

SEND 'Please enter a valid password'

END IF

IF char IN password == upper case

SEND 'Password valid to this point' TO DISPLAY

ELSE

SEND 'Your password must contain 1 upper case character to be validated.' TO DISPLAY

END IF

IF char IN password == lower case

SEND 'Password valid to this point' TO DISPLAY

ELSE

SEND 'Your password must contain 1 upper case character to be validated' TO DISPLAY

END IF

IF

IF password CONTAINS an INTEGER

SEND 'Password accepted' TO DISPLAY

ELSE

SEND 'Your password must contain a number or special character'

END IF

IF all requirements are met

DISPLAY 'Your password has been accepted, please enter your password again to ensure it matches.'

END |

Test strategy

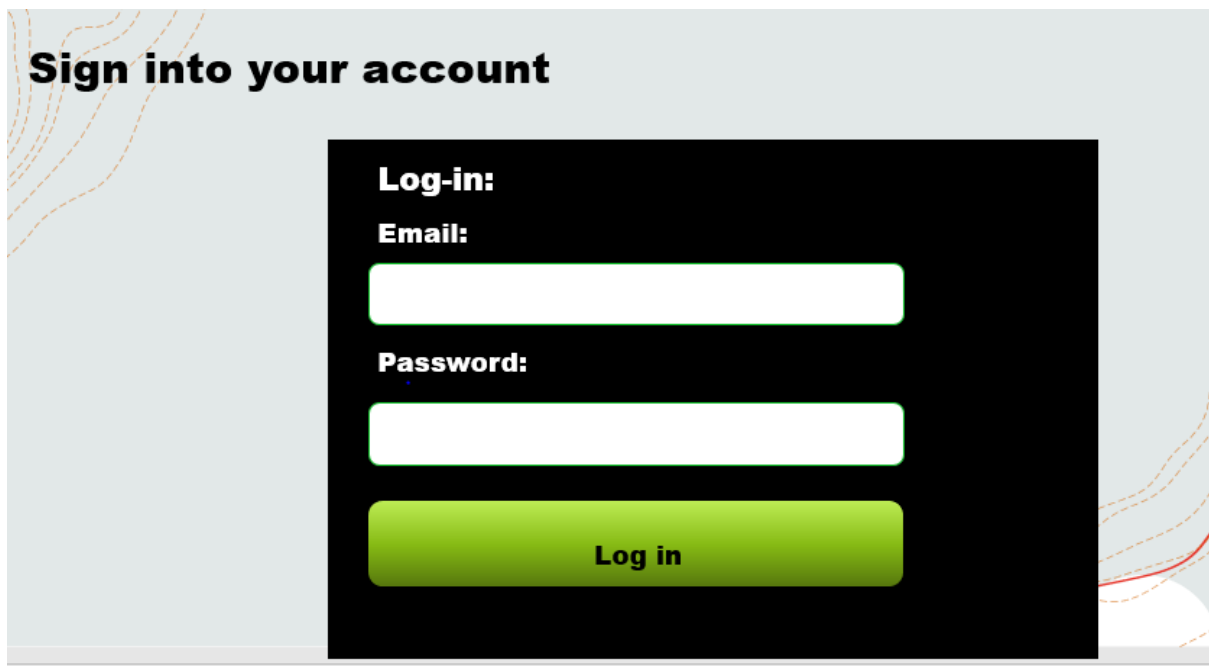
I'm going to be using black box testing and white box testing when creating my digital solution. I will be using black box testing where the inputs and outputs of the website, I will be using white box testing to test the backend/internal structure of the website.

Test strategy	Black box testing
Purpose	This test strategy allows for visual representation of all the testing that can be devised for all inputs and outputs on the program making sure everything works as intended
Who performs the test	Me
Test data set	Every action/input and output will be recorded
Test criteria	To ensure the program outputs what's intended
When to test	Test when a section of the website is completed and the inputs and outputs need to be tested
Estimated time required	Each section of the website shouldn't take more than 30 minutes to test, this may vary due to the amount of inputs/outputs there are
Test outcome	The outcome of the inputs/outputs will be compared with the intended outcome, if they don't match then any improvements needed will be made.

Date of test	Component to be tested	Type of test to be carried out	Prerequisites and dependencies
	Login page: when the password doesn't meet the requirements of an error message will show	Black box testing	Need access to the internet for the website to work, input a valid message
	Login page: when the password and the confirm	Black box testing	Need access to the website computer

	message don't match an error message will show		Input a different password in confirm password to match the original written password
	Home page: when various buttons are pressed, the website take the users where they're supposed to go	Black box testing	Need access to the website computer User needs to login to reach certain features
	Main page: (health advice, ensures that the right information is advertised	Black box testing	Users need to login then click onto Health Advice in order to get to the right place
	Customer support page: to ensure the comments the user is making get to the clients correctly	Black box testing	

user interface design document



Sign into your account

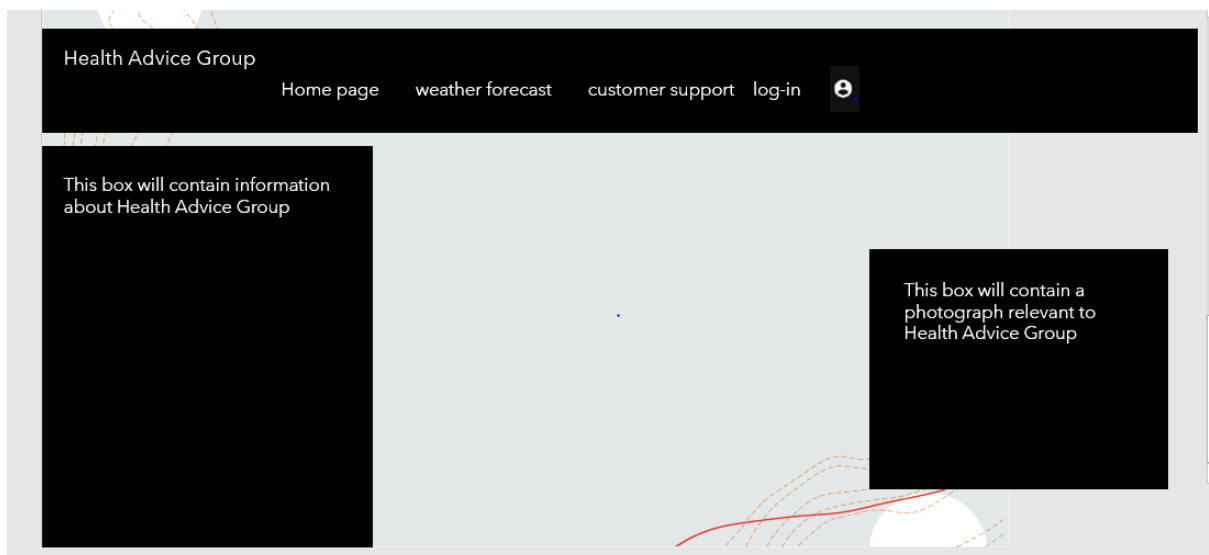
Log-in:

Email:

Password:

Log in

The login form is a dark gray rectangle with rounded corners. It contains a title 'Sign into your account' in bold black text. Below the title are labels for 'Log-in:', 'Email:', and 'Password:' in bold black text. The 'Email:' and 'Password:' labels are followed by white input fields with green borders. At the bottom of the form is a green button with the text 'Log in' in bold black text. The background of the slide is light gray with faint orange and red wavy lines on the left and right sides.



Code documentation

```
"""
ASGI config for health_advice_group project.

It exposes the ASGI callable as a module-level variable named ``application``.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/howto/deployment/asgi/
"""

import ...

os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'health_advice_group.settings')

application = get_asgi_application()
```

```
"""
Django settings for health_advice_group project.

Generated by 'django-admin startproject' using Django 4.1.7.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/4.1/ref/settings/
"""

from pathlib import Path

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent

# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/4.1/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = 'django-insecure-9_#uyl6n(!&@-2q1z+3jj+qhn$nd6%i4hkz_9ro4!a1$a(-#9#q'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = ['198.211.99.20', 'localhost', '127.0.0.1']
```

```
# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'members'
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
    'whitenoise.middleware.WhiteNoiseMiddleware'
]

ROOT_URLCONF = 'health_advice_group.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [],
        'APP_DIRS': True,
```

```

        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'health_advice_group.wsgi.application'

# Database
# https://docs.djangoproject.com/en/4.1/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': BASE_DIR / 'db.sqlite3',
    }
}

# Password validation
# https://docs.djangoproject.com/en/4.1/ref/settings/#auth-password-validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]

```

```
{
    'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
},
]

# Internationalization
# https://docs.djangoproject.com/en/4.1/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True

# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/4.1/howto/static-files/

STATIC_ROOT = BASE_DIR / 'productionfiles'
```



```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/4.1/howto/static-files/

STATIC_ROOT = BASE_DIR / 'productionfiles'

STATIC_URL = 'static/'

STATICFILES_DIRS = [
    BASE_DIR / 'mystaticfiles'
]

# Default primary key field type
# https://docs.djangoproject.com/en/4.1/ref/settings/#default-auto-field

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'
```

```
from django.contrib import admin
from django.urls import include, path

urlpatterns = [
    path('', include('members.urls')),
    path('admin/', admin.site.urls),
]
```

```

<!DOCTYPE html>
<html>
<title>Wrong address</title>
<body>

<h1>Ooops!</h1>

<h2>I cannot find the file you requested!</h2>

</body>
</html>

```

```

{% extends "master.html" %}

{% block title %}
    My Tennis Club - List of all members
{% endblock %}

{% block content %}
|
    <p><a href="/">HOME</a></p>

    <h1>Members</h1>

    <ul>
        {% for x in mymembers %}
            <li><a href="details/{{ x.id }}">{{ x.firstname }} {{ x.lastname }}</a></li>
        {% endfor %}
    </ul>
{% endblock %}

```

```
{% extends "master.html" %}
{% load static %}
{% block content %}

<h1>User Support</h1>
<p>Get support from a member of our team at Health Advice Group.</p>
<p>Chat with a member of our team;</p>
<p>Wait time: Less than 30 seconds</p>
<p>Email Health Advice Group at 'healthadvicegroup.support@gmail.com'</p>
<p>Wait time: 1-5 working business days</p>
<p>Phone us at 0192290873453</p>
<p>Wait time: Less than 30 seconds</p>

<p>To return back to the homepage click <a href="{% url 'health_advice' %}">here</a></p>
{% endblock content %}
<link rel="stylesheet" href="{% static 'mystaticfile/usersupport.css' %}">
|
```

```
{% extends "master.html" %}|

{% block title %}
    Details about {{ mymember.firstname }} {{ mymember.lastname }}
{% endblock %}

{% block content %}
    <h1>{{ mymember.firstname }} {{ mymember.lastname }}</h1>

    <p>Phone {{ mymember.phone }}</p>
    <p>Member since: {{ mymember.joined_date }}</p>

    <p>Back to <a href="/members">Members</a></p>

{% endblock %}
```

```
{% extends "master.html" %}
{% load static %}
{% block content %}

<h1>Health Advice Group</h1>
<p>Dealing with extreme weather conditions</p>
<p>When dealing with extreme heat, to cool yourself down you should consume cold foods and drinks; this prevents the body from overheating. When dealin
</p>
<p>How to deal with environmental health conditions and seasonal changes: </p>
<p>Environmental changes can cause health conditions such as asthma to become worse as seasons change, a wide range of indoor and outdoor allergens, in
Environmental changes can cause health conditions such as hay fever to worsen depending on the time of the year. Most people with hayfever are allergic
</p>
<p>Risk assessments for home environments: </p>
<p>Health Advice Group provides home risk assessments to ensure your home environment is safe when you have health conditions such as asthma. Exposure
</p>
<p>For weather forecasting click <a href="{% url 'https://open-meteo.com/' %}">here</a></p>
<p>For the user support web page click <a href="{% url 'customer_support' %}">here</a></p>

{% endblock content %}
<link rel="stylesheet" href="{% static 'mystaticfile/healthadvice.css' %}">
```

```
{% extends "master.html" %}
```

```
{% block title %}
```

```
    Health Advice Group
```

```
{% endblock %}
```


```
{% block content %}
```

```
    <h1>Health Advice Group</h1>
```

```
    <h3>Members</h3>
```

```
    <p>Check out all our <a href="members/">members</a></p>
```

```
{% endblock %}
```

```
<html>
<head>
  <title>{% block title %}{% endblock %}</title>
</head>
<body>
  
  {% block content %}|
  {% endblock %}
</body>
</html>
```

```
<!DOCTYPE>
<html>
<body>

  <h1>Hello World!</h1>
  <p>Welcome to this website, it makes me want to cry lol</p>

</body>
<body>
|
```

```
<!DOCTYPE html>
{% load static %}
<html>
<link rel="stylesheet" href="{% static 'myglobal.css' %}">
<body>

{% for x in fruits %}
    <h1>{{ x }}</h1>
{% endfor %}

</body>
</html>
```

```
from django.contrib import admin
from .models import Member

# Register your models here.
admin.site.register(Member)
```

```
from django.apps import AppConfig

class MembersConfig(AppConfig):
    default_auto_field = 'django.db.models.BigAutoField'
    name = 'members'
```

```
from django.db import models
```

```
class Member(models.Model):  
    firstname = models.CharField(max_length=255)  
    lastname = models.CharField(max_length=255)  
    phone = models.IntegerField(null=True)  
    joined_data = models.DateField(null=True)  
  
    def __str__(self):  
        return f"{self.firstname} {self.lastname}"
```

```
from django.urls import path
```

```
from . import views
```

```
urlpatterns = [  
    path('', views.main, name='main'),  
    path('customer-support/', views.customer_support, name="customer_support"),  
    path('members/', views.members, name='members'),  
    path('members/details/<int:id>', views.details, name='details'),  
    path('testing/', views.testing, name='testing'),  
    path('healthadvice/', views.health_advice_information, name="health_advice")  
]
```

```
from django.http import HttpResponseRedirect
from django.template import loader
from .models import Member

def members(request):
    mymembers = Member.objects.all().values()
    template = loader.get_template('all_members.html')
    context = {
        'mymembers': mymembers,
    }
    return HttpResponseRedirect(template.render(request, context))

def details(request, id): # GETS USERS FIRST AND LAST NAME
    mymember = Member.objects.get(id=id)
    template = loader.get_template('details.html')
    context = {
        'mymember': mymember,
    }
    return HttpResponseRedirect(template.render(context, request))

def main(request):
    template = loader.get_template('main.html')
    return HttpResponseRedirect(template.render())
```



```
def testing(request):
    template = loader.get_template('template.html')
    context = {
        'fruits': ['Apple', 'Banana', 'Cherry'],
    }
    return HttpResponse(template.render(context, request))

def testing(request):
    mydata = Member.objects.values_list('firstname')
    template = loader.get_template('template.html')
    context = {
        'mymembers': mydata,
    }
    return HttpResponse(template.render(context, request))

def customer_support(request):
    template = loader.get_template('customer_support.html')
    return HttpResponse(template.render({}, request))

def health_advice_information(request):
    template = loader.get_template('health_advice.html')
    return HttpResponse(template.render({}, request))
```

Task 2: Test log

Description of test	Test data to be used (if required)	Expected outcome	Actual outcome	Comments and intended actions
Testing		If more than 255 characters are entered when entering a password then it will output an error message	When I entered more than 255 characters, it came up with an error message.	Date tested: 12/03/2023. There were no further intended actions needed.
Launch applications		This testing is to ensure that when a user clicks onto the webpage, it takes them to the homepage	When i clicked onto the website, it took me straight to the homepage	Date tested: 15/03/2023. Launch was successful so there was no need for any further action.
Testing phone numbers	I entered a 4 character phone number	The average character in a phone number is 11, when I enter 4 characters it should output an error message and tell the user to enter a valid phone number	When the wrong amount of characters were entered, there was an output message given	Date tested: 15/03/2023. Launch was successful so there was no need for any further action.
Test adding members	Add member Angela Wakeman	Expected outcome for adding members is to add members with their personal information	Actual outcome, all of the information to the member wasn't added correctly	I have now added the right code needed to save the information correctly

Code documentation

```
"""
ASGI config for health_advice_group project.

It exposes the ASGI callable as a module-level variable named ``application``.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/howto/deployment/asgi/
"""

import ...

os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'health_advice_group.settings')

application = get_asgi_application()
```

```
"""
Django settings for health_advice_group project.

Generated by 'django-admin startproject' using Django 4.1.7.

For more information on this file, see
https://docs.djangoproject.com/en/4.1/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/4.1/ref/settings/
"""

from pathlib import Path

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent

# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/4.1/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = 'django-insecure-9_#uyl6n(!&@-2q1z+3jj+qhn$nd6%i4hkz_9ro4!a1$a(-#9#q'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = ['198.211.99.20', 'localhost', '127.0.0.1']
```

```
# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'members'
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
    'whitenoise.middleware.WhiteNoiseMiddleware'
]

ROOT_URLCONF = 'health_advice_group.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [],
        'APP_DIRS': True,
```

```

        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'health_advice_group.wsgi.application'

# Database
# https://docs.djangoproject.com/en/4.1/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': BASE_DIR / 'db.sqlite3',
    }
}

# Password validation
# https://docs.djangoproject.com/en/4.1/ref/settings/#auth-password-validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]

```

```
{
    'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
},
{
    'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
},
]

# Internationalization
# https://docs.djangoproject.com/en/4.1/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True

# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/4.1/howto/static-files/

STATIC_ROOT = BASE_DIR / 'productionfiles'
```

```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/4.1/howto/static-files/

STATIC_ROOT = BASE_DIR / 'productionfiles'

STATIC_URL = 'static/'

STATICFILES_DIRS = [
    BASE_DIR / 'mystaticfiles'
]

# Default primary key field type
# https://docs.djangoproject.com/en/4.1/ref/settings/#default-auto-field

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'
```

```
from django.contrib import admin
from django.urls import include, path

urlpatterns = [
    path('', include('members.urls')),
    path('admin/', admin.site.urls),
]
```

```

<!DOCTYPE html>
<html>
  <title>Wrong address</title>
  <body>

    <h1>Ooops!</h1>

    <h2>I cannot find the file you requested!</h2>

  </body>
</html>

```

```

{% extends "master.html" %}

{% block title %}
  My Tennis Club - List of all members
{% endblock %}

{% block content %}
  <p><a href="/">HOME</a></p>

  <h1>Members</h1>

  <ul>
    {% for x in mymembers %}
      <li><a href="details/{{ x.id }}">{{ x.firstname }} {{ x.lastname }}</a></li>
    {% endfor %}
  </ul>
{% endblock %}

```



```
{% extends "master.html" %}
{% load static %}
{% block content %}

<h1>User Support</h1>
<p>Get support from a member of our team at Health Advice Group.</p>
<p>Chat with a member of our team;</p>
<p>Wait time: Less than 30 seconds</p>
<p>Email Health Advice Group at 'healthadvicegroup.support@gmail.com'</p>
<p>Wait time: 1-5 working business days</p>
<p>Phone us at 0192290873453</p>
<p>Wait time: Less than 30 seconds</p>

<p>To return back to the homepage click <a href="{% url 'health_advice' %}">here</a></p>
{% endblock content %}
<link rel="stylesheet" href="{% static 'mystaticfile/usersupport.css' %}">
|
```

```
{% extends "master.html" %}|
{% block title %}
    Details about {{ mymember.firstname }} {{ mymember.lastname }}
{% endblock %}

{% block content %}
    <h1>{{ mymember.firstname }} {{ mymember.lastname }}</h1>

    <p>Phone {{ mymember.phone }}</p>
    <p>Member since: {{ mymember.joined_date }}</p>

    <p>Back to <a href="/members">Members</a></p>

{% endblock %}
```

```
{% extends "master.html" %}
{% load static %}
{% block content %}

<h1>Health Advice Group</h1>
<p>Dealing with extreme weather conditions</p>
<p>When dealing with extreme heat, to cool yourself down you should consume cold foods and drinks; this prevents the body from overheating. When dealin
</p>
<p>How to deal with environmental health conditions and seasonal changes: </p>
<p>Environmental changes can cause health conditions such as asthma to become worse as seasons change, a wide range of indoor and outdoor allergens, in
Environmental changes can cause health conditions such as hay fever to worsen depending on the time of the year. Most people with hayfever are allergic
</p>
<p>Risk assessments for home environments: </p>
<p>Health Advice Group provides home risk assessments to ensure your home environment is safe when you have health conditions such as asthma. Exposure
</p>
<p>For weather forecasting click <a href="{% url 'https://open-meteo.com/' %}">here</a></p>
<p>For the user support web page click <a href="{% url 'customer_support' %}">here</a></p>

{% endblock content %}
<link rel="stylesheet" href="{% static 'mystaticfile/healthadvice.css' %}">
```

```
{% extends "master.html" %}
```

```
{% block title %}
```

```
    Health Advice Group
```

```
{% endblock %}
```


```
{% block content %}
```

```
    <h1>Health Advice Group</h1>
```

```
    <h3>Members</h3>
```

```
    <p>Check out all our <a href="members/">members</a></p>
```

```
{% endblock %}
```

```
<html>
<head>
  <title>{% block title %}{% endblock %}</title>
</head>
<body>
  
  {% block content %}|
  {% endblock %}
</body>
</html>
```

```
<!DOCTYPE>
<html>
<body>

  <h1>Hello World!</h1>
  <p>Welcome to this website, it makes me want to cry lol</p>

</body>
<body>
|
```

```
<!DOCTYPE html>
{% load static %}
<html>
<link rel="stylesheet" href="{% static 'myglobal.css' %}">
<body>

{% for x in fruits %}
    <h1>{{ x }}</h1>
{% endfor %}

</body>
</html>
```

```
from django.contrib import admin
from .models import Member

# Register your models here.
admin.site.register(Member)
```

```
from django.apps import AppConfig

class MembersConfig(AppConfig):
    default_auto_field = 'django.db.models.BigAutoField'
    name = 'members'
```

```
from django.db import models
```

```
class Member(models.Model):  
    firstname = models.CharField(max_length=255)  
    lastname = models.CharField(max_length=255)  
    phone = models.IntegerField(null=True)  
    joined_data = models.DateField(null=True)  
  
    def __str__(self):  
        return f"{self.firstname} {self.lastname}"
```

```
from django.urls import path
```

```
from . import views
```

```
urlpatterns = [  
    path('', views.main, name='main'),  
    path('customer-support/', views.customer_support, name="customer_support"),  
    path('members/', views.members, name='members'),  
    path('members/details/<int:id>', views.details, name='details'),  
    path('testing/', views.testing, name='testing'),  
    path('healthadvice/', views.health_advice_information, name="health_advice")  
]
```

```
from django.http import HttpResponseRedirect
from django.template import loader
from .models import Member

def members(request):
    mymembers = Member.objects.all().values()
    template = loader.get_template('all_members.html')
    context = {
        'mymembers': mymembers,
    }
    return HttpResponseRedirect(template.render(request, context))

def details(request, id): # GETS USERS FIRST AND LAST NAME
    mymember = Member.objects.get(id=id)
    template = loader.get_template('details.html')
    context = {
        'mymember': mymember,
    }
    return HttpResponseRedirect(template.render(context, request))

def main(request):
    template = loader.get_template('main.html')
    return HttpResponseRedirect(template.render())
```

```
def testing(request):
    template = loader.get_template('template.html')
    context = {
        'fruits': ['Apple', 'Banana', 'Cherry'],
    }
    return HttpResponse(template.render(context, request))

def testing(request):
    mydata = Member.objects.values_list('firstname')
    template = loader.get_template('template.html')
    context = {
        'mymembers': mydata,
    }
    return HttpResponse(template.render(context, request))

def customer_support(request):
    template = loader.get_template('customer_support.html')
    return HttpResponse(template.render({}, request))

def health_advice_information(request):
    template = loader.get_template('health_advice.html')
    return HttpResponse(template.render({}, request))
```

[illegible]



Explore Pearson's
T Levels offering at
quals.pearson.com/tlevels

Copyright in this document belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education, © 2023. 'T-LEVELS' is a registered trade mark of the Department for Education. 'T Level' is a registered trade mark of the Institute for Apprenticeships and Technical Education. 'Institute for Apprenticeships & Technical Education' and logo are registered trade marks of the Institute for Apprenticeships and Technical Education.

The T Level Technical Qualification in Digital Production, Design and Development is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Pearson Education Limited is authorised by the Institute for Apprenticeships and Technical Education to develop and deliver this Technical Qualification.

Pearson and logo are registered trade marks of Pearson.