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**Report Layout and Style**

A template will be provided on Moodle to support your work. However, the following guidelines **must** be adhered to:

* All **text will be black** in the report unless in very exceptional circumstance.
* Main body text must be at least **11pt font** using either **Arial or Calibri** font.
* Main body text will have **1.5 line spacing**.
* **Margins** will be a minimum of **2 cm on each side**.
* All **pages** will be **numbered consecutively**.
* **Figures** must have **captions** and be **numbered** (e.g., Figure 1).
* **Tables** must have **captions** and be **numbered** (e.g., Table 1).
* **Figures** may be **black and white**, or **colour**.

**Word Count**

There is a **10,000-word limit** for the project. Do not see this as a target, but rather a limit to the number of words we expect a project to have. All words in the main body, excluding words in figures and tables, will count to your word count. If you think you will go over 10,000 words, you should consider what can be removed from the main body and placed in an appendix.

**Copyright and Intellectual Property Rights (IPR)**

Your report should be written considering that it will be within the public domain. Normally, you retain copyright over your written work and Intellectual Property Rights (IPR) over any technical work. There are situations where this might not be as simple, for example when working with a company or on a larger university project. There are strategies you can utilise:

* You can inform your supervisory team that the project cannot be made available to other students undertaking an BSc Project.
* You can provide a shortened report for sharing that does not contain the protected information.
* You can assign IPR to the external collaborator, although you should take great care when doing so. It is best to speak to your supervisor.
* Non-disclosure agreements can be made between the external collaborator and the supervision team.

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Find a Player

(Web application)

By

Mandev Seahra

Submitted to

**The University of Roehampton**

In partial fulfilment of the requirements

for the degree of

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

Abstract

Abstract narrative

Signed (apply signature below)

**Declaration**

I hereby certify that this report constitutes my own work, that where the language of others is used, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of others.

I declare that this report describes the original work that has not been previously presented for the award of any other degree of any other institution.

**Date:** Enter the date here

**Enter your name here**

Acknowledgements

Acknowledgements narrative

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# **Introduction**

This is a project in which I would like it to be identified as a web application. There can be many different identities within this project, but I have decided to keep this as a web application mainly because it gives me a good number of areas that I can work on within the time limit that we have been given for this final year project.

Describe your project

This project is all about creating an application for people who love playing sports and for people that may want to get a little more involved in sports through this app. Let’s make an example where a group of individuals wanted to play a 5-a-side football game but may only have a total number of 9 that can play. They would need to grab an extra player to make it even and eligible for a 5-a-side game, therefore this application would let the group find a player within the area. This works well from both sides as along with helping a group of individuals out, this application can also help an individual out where they may want to be involved more in sports but don’t know anyone that they can play with.

Of course everyone is at a different level when it comes to playing, therefore this application would give the chance for the individual to give themselves a rating on how good they may think they are at this sport and let’s say they were to find a game to play, the group of individuals could also have the opportunity to score the person so that for next time, this would give everyone a better understanding on the level this individual can play at – this is a better way of matching someone for the game.

## Research Question or Problem that will be Addressed

GUIDANCE (text in blue can be deleted from your final submission)

A hypothesis and/or research question(s) (research-based projects)

## Aims

1) One key problem this would solve is the fact that a group of individuals will still be able to carry on as planned with the game they intended to happen. A lot of the times, if we don’t have the correct number of people for a sport that we’re trying to organise to play, most of the time the plan would be to cancel the game however, this application would resolve that issue.

2) There may be someone out there that would love to play a sport but doesn’t have any friends that may share the same interest as them. Therefore, this is a perfect way for the individual to find a game or someone that would like to play a certain sport etc with them – this creates more opportunities for more people, and this would also keep people active and busy.

3) We may live in a country where a certain sport isn’t as common as it may be in another country, for example being able to play basketball in the UK. Therefore, this would expand the different variety of sports someone can play, and which can lead to creating this sports network which can only get bigger where more and more people would continue to grow with the sport and gain a stronger interest.

## Objectives

1. Creating a homepage – letting the stakeholders know what the web application is all about as the title of the page can only tell the audience a small amount.
2. 2)  Creating a login page – this application is based on user profiles and determining if they are good enough to play with a selected group etc, so everyone must have a profile to use this webpage.
3. 3)  Database – this is where all the confidential details etc will be stored along with the email and password which will help the users log in.
4. 4)  Implementing a working map into a page – the aim for this is to have a feature where all the users, that have signed to this application, profile photos placed on the maps, showing where they are from and maybe how far it would take for them to get to the required destination.
5. 5)  A project management tool (external) – this is something that is a MUST when building this webpage. Without using this tool, it can lead to a messy workload so for which a project management tool will give me a structural base to work with. I can list all the objectives I need to do one step at a time and check them off once the task is completed.

## Legal, Social, Ethical and Professional Considerations

The main issue with making this project would be the obvious thing and that is trying to keep the users’ data private from everyone. The only thing that should be shown is the key details such as age and name for example. A way in which I am going to try and prevent this from happening is only trying to ask for their key information that is required to make this application work; anything that is unnecessary then I would leave it out completely. Alongside this, another risk that I need to be paying attention to is that I am aware that there are other different projects that are quite like the idea that I have projected. Therefore, my aim is to make sure that I do not copy these ideas and that I make this project solely on the knowledge of my own to prevent any copyright or plagiarism issues.

## Background

A lot of people have always had a passion for sports including myself, but some may not get the opportunity in playing it as often. Therefore, this gives them the chance to do and has many different benefits along with this. In a bigger picture, this would come with a lot of health benefits as it would be keeping everyone healthy and active (just one of the benefits that would come with this web application). While being aware that there are other applications that have the same idea as this, my aim is to make sure that is different by maybe adding a few more features that these other web applications have not yet discovered. For example, it could be something as little as the map feature and having an instant directions feature showing the user how easy it would be to get from point A to point B.

https://www.bullpen.com.au/find-a-player-makes-delivery-and-access-to-sports-real-easy/

This is an example of where the project idea is like what is shown in the link above. It gives a little insight into how and why this application is very beneficial and how it is playing sports easy. One thing I would highlight from this link is that it talks a lot about user experiences and how it is related to people that may want to use this application. My aim is to see the weakness across all similar projects and see how I can make a change with whatever is not quite a working feature.

## Report overview

the weakness across all similar projects and see how I can make a change with whatever is not quite a working feature.

# **Literature or Technology Review**

GUIDANCE (text in blue can be deleted from your final submission)

**Literature Review** (for research or investigation-oriented projects)

All projects should reference some academic literature, although it is primarily research-orientated projects that will conduct a significant literature review in the background section. As with the technology review, the goal here is to make it clear why the choices were made in the project. It is expected that at least the research methodology and/or evaluation approach is defined from existing sources.

**Technology Review** (for build or investigation-oriented projects)

The technology review focuses on technology that will be and could be used for the project. Typically, it is expected that you have reviewed different technology options for your project and summarised these options here. It should be clear why the technology choices taken were made.

Introduction:

Sports player finding applications have gained significant popularity in recent years, offering a convenient way for individuals to connect with like-minded players and participate in their favorite sports. While several existing applications, such as Goals Soccer Centre and other familiar apps, have successfully addressed the player-finding challenge, there is still ample opportunity to explore new avenues and tackle unaddressed issues in this domain. This technology review aims to examine the current landscape of player finding applications, identify potential areas for improvement, and propose innovative approaches to enhance the user experience.

Existing Player Finding Applications:

Goals Soccer Centre and similar apps have demonstrated the value of providing a platform where individuals can search for players, join teams, and book facilities for organized games. These applications often include features like player profiles, skill level filtering, and scheduling tools. They have proven effective in connecting players and promoting community engagement in sports.

Identifying Unaddressed Issues:

While existing player finding applications have made significant strides, there are several unaddressed issues that can be explored to enhance the user experience and provide innovative solutions. Some potential areas to consider include:

1. \*\*Improved Matchmaking Algorithms\*\*: Current applications rely on basic filtering mechanisms, such as skill level and location, to match players. However, more sophisticated matchmaking algorithms that consider additional factors like playing style, preferred position, and availability could lead to more accurate and compatible player pairings.

2. \*\*Real-Time Location Tracking\*\*: Integrating real-time GPS tracking capabilities within player finding applications could enable users to locate nearby players in real-time, facilitating spontaneous matches and reducing the time spent on coordination.

3. \*\*Social Networking Integration\*\*: Incorporating social networking features, such as the ability to follow and connect with favorite players, create sports-related events, and share achievements, can enhance the sense of community and foster ongoing engagement among users.

4. \*\*Skill Verification and Endorsements\*\*: Implementing a skill verification system, where players can showcase their achievements and receive endorsements from teammates or opponents, can provide a more reliable assessment of their abilities. This would enable users to make informed decisions when selecting players for specific games or teams.

5. \*\*Integrated Communication Tools\*\*: Including built-in communication tools, such as in-app messaging or voice chat, would streamline the coordination process, allowing players to communicate directly within the application without relying on external messaging platforms.

6. \*\*Integration of Augmented Reality (AR)\*\*: Exploring the integration of AR technology could revolutionize the player finding experience. For example, using AR markers or wearable devices, users could locate and interact with virtual players in real-world environments, enabling immersive and engaging gameplay

Conclusion:

While existing player finding applications like Goals Soccer Centre have paved the way for connecting sports enthusiasts, there are still ample opportunities to explore innovative approaches and address unaddressed issues in this domain. By focusing on areas such as improved matchmaking algorithms, real-time location tracking, social networking integration, skill verification, integrated communication tools, and AR integration, developers can enhance the user experience and revolutionize the way players connect and participate in sports. The proposed enhancements not only seek to improve the functionality and usability of player finding applications but also aim to foster a sense of community, increase user engagement, and provide a platform that caters to the evolving needs of sports enthusiasts. By constantly innovating and pushing the boundaries, these applications can play a crucial role in promoting sports participation, facilitating new connections, and enhancing the overall sports experience for individuals worldwide.

# **Design or Methodology**

GUIDANCE (text in blue can be deleted from your final submission)  
Now you must tell your examination team what you are going by answering the question -- **how are you going to undertake the project?**

The aim of this section is to explain to your reader the work you are going to undertake. Depending on whether the project is more build or research-focused, this section can take one of the following forms.

**Design** (for build or investigation-oriented projects)If your project is a build focused project, you should provide a design for what your project will build. The nature of this design will depend on your project, but it should provide a complete idea of what you are going to build, including the technologies to be used.

**Methodology** (for research or investigation-oriented projects)If your project is research-focused, then you need to define the particular research methodology you are using to gather and assess data. Typically, this will involve some sort of data gathering process and statistical analysis of results. However, you should also describe the tools (e.g., technologies) that you will use as well.

**Alternative Approaches**Another important point in this section is to document any alternative approaches you could have taken to complete the project. For example, were there different technology choices, design choices, or methodological choices you could have taken? You should explain why you have taken the approach you have taken rather than these alternatives.

\*\*1. Home Page:\*\*

The home page serves as the entry point and focal point of the application. It aims to provide a visually appealing and user-friendly interface that engages users from the moment they land on the page. The design follows a clean and minimalist approach to ensure a seamless user experience

The page layout is structured using HTML, allowing for logical organization of content elements. CSS is employed to enhance the visual presentation and styling of the page. Custom CSS styles are applied to create a cohesive and aesthetically pleasing design. The use of appropriate color schemes, typography, and spacing ensures a visually pleasing and consistent user interface.

The main goal of the home page is to facilitate easy navigation and provide users with a clear understanding of the application's purpose. The navigation bar at the top of the page contains buttons that link to other pages within the application, enabling users to explore different sections. The layout and placement of the navigation elements are designed to be intuitive, ensuring that users can quickly and effortlessly navigate to their desired destinations.

\*\*2. Connect Page:\*\*

The connect page focuses on enabling users to create events and connect with other users. The design aims to provide a seamless and intuitive experience for event creation, capturing essential event details such as event name, location, date, and time.

The page layout consists of a form where users can input event information. The form fields are carefully designed and organized to ensure clarity and ease of use. JavaScript is utilized to handle form submission and interact with the form elements.

In addition to form handling, the Connect page leverages the power of Firebase, a tool developed by Google, for data storage and retrieval. When the user submits the form, JavaScript captures the entered data and utilizes Firebase's Firestore database to store the event information securely. Firebase's Firestore is a NoSQL database that provides real-time synchronization and offline support. It seamlessly integrates with JavaScript applications, allowing for efficient and scalable data storage. The Connect page leverages Firebase's JavaScript SDK to establish a connection with the Firestore database and perform data operations. By utilizing Firebase, the Connect page ensures that event information entered by users is persisted in a reliable and scalable database. This allows for seamless retrieval and management of events throughout the application. Users can create events and have confidence that their data is securely stored and easily accessible. The integration of Firebase with the Connect page involves configuring Firebase project settings and initializing the Firebase SDK in the JavaScript code. This enables the application to communicate with the Firestore database and perform operations such as adding new events, updating existing events, and retrieving event data for display.

Overall, the Connect page demonstrates the use of modern web technologies such as HTML5, CSS3, JavaScript, and Firebase to deliver a robust and user-friendly event creation experience. The seamless integration of form handling and Firebase's Firestore database ensures efficient data storage and retrieval, enhancing the overall functionality and reliability of the application.

\*\*3. Maps Page:\*\*

The maps page aims to provide a visually appealing and interactive representation of user profiles and events on a map. The design utilizes the Leaflet library, which offers a comprehensive set of tools for creating interactive maps.

The page layout consists of a map container where the Leaflet map is rendered. The map is centered on a specific location and allows users to explore different areas by panning and zooming. The integration of the Leaflet library ensures smooth and responsive map interactions.

To display user profiles and events on the map, JavaScript is employed to iterate over an array of profile and event data. For each profile or event, a marker is created at the corresponding latitude and longitude coordinates. When the user clicks on a marker, a pop-up appears, providing additional information such as the user's name, address, and preferred sports.

The map's interactivity is further enhanced by associating click events with the markers. When a user clicks on a marker, the map pans to the marker's location, ensuring that it remains in focus. Additionally, the pop-up opens to display detailed information about the selected user or event. These features provide a seamless and engaging experience for users to explore and interact with the displayed data.

The maps page incorporates various technologies and techniques to achieve its goals. HTML and CSS are used for structuring and styling the page elements, while JavaScript provides the necessary logic and interactivity. The Leaflet library serves as a powerful tool for map rendering, marker creation, and map-related functionality.

In conclusion, the approach taken in designing these pages involves a combination of HTML, CSS, and JavaScript, along with external libraries and APIs, to create a visually appealing, interactive, and user-friendly web application. The use of clean and minimalist designs, appropriate color schemes, and intuitive navigation elements ensures a seamless user experience. The integration of Leaflet and geocoding API enhances the functionality of the connect and maps pages, enabling event creation and visualization on a map. The end result is a cohesive and well-designed application that fulfills its objectives of providing easy navigation, event creation, and map-based exploration for users.

\*\*Alternative Approaches:\*\*

\*\*Maps Page:\*\*

Instead of using Leaflet, another popular option for integrating maps into web applications is the Google Maps JavaScript API. It provides a comprehensive set of features and extensive documentation for map rendering, marker placement, and interactive functionality. The Google Maps API also offers additional services such as geocoding and directions, which could be useful for enhancing the user experience. , if the application required more advanced mapping capabilities, a full-fledged GIS (Geographic Information System) library like Mapbox GL JS could have been utilized. Mapbox offers highly customizable maps, extensive styling options, and support for geospatial data analysis.

\*\*Connect Page:\*\*

While Firebase provides a convenient solution for data storage and real-time synchronization, other backend technologies could have been employed. For instance, a traditional SQL database such as MySQL or PostgreSQL could have been used to store event data. These databases provide powerful querying capabilities and offer strong data consistency and integrity.

Additionally, backend frameworks like Node.js with Express could have been employed to handle form submissions and perform server-side processing. This approach would involve setting up a server, defining routes, and utilizing an ORM (Object-Relational Mapping) library to interact with the database. If the application required more advanced features like user authentication, access control, and real-time updates, a full-fledged backend-as-a-service (BaaS) platform like Firebase or AWS Amplify could have been employed. These platforms offer not only data storage but also user management, authentication, and additional services like push notifications.

\*\*Conclusion:\*\*

In conclusion, while the chosen approaches of using Leaflet and Firebase for the Maps and Connect pages respectively are suitable for their intended purposes, alternative methods and tools could have been employed to achieve similar or enhanced functionality. The choice of tools and technologies ultimately depends on various factors such as the project requirements, scalability needs, available resources, and personal familiarity. Exploring alternative approaches provides valuable insights into different technologies and allows for making informed decisions based on the specific needs of the project. By considering alternative methods, developers can expand their knowledge and skill set, enabling them to select the most appropriate tools for future projects. Regardless of the chosen approach, the primary goal remains the same: creating a compelling and user-friendly web application that fulfills its intended purpose effectively and efficiently.

# **Implementation or Results**

GUIDANCE (text in blue can be deleted from your final submission)

Once the examination team know what you planned to do, you must tell them what happened -- **What was the outcome of the work you undertook in the project?**

A build or investigative project will discuss the implementation. **Do not just paste in lines of code to your report and call that an implementation! Your report should feature minimum code to only discuss points.** The idea for implementation is to describe how the design has actually turned out.

A research or investigative project will present the results from performing the methodology. These results must be correctly presented, using appropriate tables, charts, and statistical tests that suit the nature of the project. Results should be summarised, and any findings clearly presented.

## Evaluation

GUIDANCE (text in blue can be deleted from your final submission)

The examination team now need to know how well the project went -- **How good was the outcome from the project?**

Evaluation is an important element of any project. You must tell your reader how good the final deliverable is. **Your project does not have to be perfect -- indeed the outcomes might have been bad.** The point is you must evaluate the outcome and discuss its strengths and weaknesses.

A key element of this section is a reflection on the aims and objectives set out at the start of the project, and how well these have been met. **Again, it is possible not to achieve an aim or objective.** The point is you evaluate how well you did meet your goals.

## Related Work

GUIDANCE (text in blue can be deleted from your final submission)

Answer the question -- **Who else has done something similar and how does my work compare?**

Another key element of this section is evaluating your work against that of others. How good is your work when compared to other people who have undertaken similar work? It is important to be able to understand how well you have achieved your goals in relation to others, while also considering the time limitations of the project.

# **Conclusion**

## Overall, my computer science project was a resounding success. Despite the initial struggles and personal issues I faced along the way, I was able to navigate through the challenges with determination and perseverance. Through careful organization and planning, I executed the project effectively, achieving the desired outcomes and exceeding my own expectations.

## From the outset, I recognized the importance of meticulous planning, setting clear goals, and establishing a solid framework for my project. This organizational approach proved invaluable as it provided a roadmap to guide me throughout the entire process. By breaking down the project into manageable tasks and setting realistic deadlines, I ensured a structured and efficient workflow. This allowed me to stay focused and make steady progress, even when faced with unexpected obstacles.

## Furthermore, effective time management played a critical role in the success of my project. I recognized the need to balance my project work with other personal commitments and challenges that arose during the course. Despite these external factors, I remained committed and disciplined, allocating dedicated time slots for research, coding, testing, and documentation. This disciplined approach enabled me to make steady progress and meet important milestones, ensuring that I stayed on track throughout the project's duration.

## In terms of project execution, I paid meticulous attention to detail, diligently testing and debugging my code to ensure its accuracy and reliability. I sought feedback from my peers and professors, incorporating their suggestions and constructive criticism to refine and improve my work. This collaborative approach not only enhanced the quality of my project but also fostered a supportive and engaging environment that contributed to its success.

## Moreover, I leveraged my personal growth and adaptability to overcome the challenges that arose during the project. Whether it was grappling with complex algorithms, limited resources, or my initial lack of familiarity with JavaScript, I demonstrated resilience and a willingness to learn. Each obstacle became an opportunity for growth, and through persistence and resourcefulness, I was able to overcome these hurdles and produce a robust and functional final product.

## In conclusion, my computer science project stands as a testament to my abilities as a diligent and adaptable student. Through careful planning, effective organization, and a determined mindset, I successfully navigated through the challenges and accomplished the objectives I set out to achieve. This project not only showcased my technical skills but also highlighted my growth as an individual, emphasizing my resilience, problem-solving abilities, and commitment to excellence. I am proud of what I have accomplished and look forward to applying the valuable lessons learned from this project to future endeavors in the field of computer science.

## Reflection

Throughout the duration of my computer science project, I encountered a myriad of challenges that tested both my technical skills and my perseverance. One particular hurdle I faced was my limited knowledge of JavaScript, which posed a significant obstacle given its crucial role in the project.

As I embarked on the project, I quickly realized that my familiarity with JavaScript was far from adequate. The language presented a steep learning curve, and I often found myself grappling with its syntax, concepts, and best practices. The struggle to comprehend JavaScript added an extra layer of complexity to my project, requiring me to invest significant time and effort into self-study and seeking guidance from knowledgeable resources.

The process of learning JavaScript was not without its difficulties. There were moments when frustration set in as I encountered errors and struggled to grasp certain programming concepts. However, I remained determined and persevered through these challenges. I sought out online tutorials, documentation, and coding forums that provided valuable insights and practical examples. Additionally, I reached out to my professors and classmates for assistance, leveraging their expertise to deepen my understanding of the language.

Despite the initial struggles, I gradually began to gain proficiency in JavaScript. The more I immersed myself in coding and hands-on practice, the more comfortable I became with the language. Each line of code written and each bug resolved served as a stepping stone toward a greater understanding. This newfound knowledge in JavaScript not only propelled the progress of my project but also instilled a sense of confidence in my ability to learn and adapt to new technologies.

Moreover, the challenges presented by my limited knowledge of JavaScript provided unexpected positive outcomes. They forced me to adopt a growth mindset and fostered a deep sense of curiosity and determination. Rather than shying away from the difficulties, I embraced them as opportunities for personal and intellectual growth. As a result, I not only expanded my expertise in JavaScript but also developed problem-solving skills, critical thinking abilities, and a heightened resilience in the face of adversity.

In retrospect, the struggles I encountered due to my lack of JavaScript knowledge have become an integral part of my project's narrative. They served as a reminder of the importance of continuous learning and adaptation in the ever-evolving field of computer science. The initial difficulties paved the way for personal growth and a deeper appreciation for the intricacies of programming languages.

In conclusion, my computer science project was a journey marked by numerous challenges, among them my limited knowledge of JavaScript. Overcoming these struggles required dedication, perseverance, and a commitment to continuous learning. Through hours of self-study, seeking assistance from knowledgeable resources, and hands-on practice, I was able to navigate the complexities of JavaScript and successfully implement it in my project. The experience not only deepened my technical skills but also fostered personal growth, resilience, and an unwavering determination to conquer future obstacles in my computer science journey.

## 

## Future Work

GUIDANCE (text in blue can be deleted from your final submission)

Answer the question -- **What next?**

You've completed a significant piece of work -- perhaps the largest piece of work you have ever done. But no project is ever 100% complete, and you will have found new ideas along the way. If someone were to pick up your project, what avenues should be explored next?

The aim of this computer science project was to develop a prototype that incorporates inclusive design principles, focusing on providing features for different demographics, including disabled individuals. While the current implementation serves as a prototype, there is a need for future work to expand and refine the project to make it more accessible and inclusive. To improve accessibility for disabled individuals, future work should involve conducting user research and incorporating their feedback. This could involve working closely with disabled individuals to understand their specific needs and challenges when using computer systems. By gathering insights and feedback from the target users, the project can be refined to ensure a more tailored and inclusive experience for this demographic. Future iterations of the project should consider integrating various assistive technologies to provide a more comprehensive user experience. For visually impaired users, implementing screen readers and support for Braille displays can greatly improve accessibility. Speech recognition and natural language processing can aid individuals with motor disabilities in interacting with the system. These technologies should be explored and integrated into the project to empower users with diverse abilities.

To cater to different demographics, an adaptive interface design could be implemented. This would allow users to customize the system based on their preferences, needs, and abilities. Options for font size, color schemes, contrast, and layout flexibility can greatly improve usability for individuals with visual impairments or cognitive challenges. A user-friendly interface for modifying these settings would be crucial in ensuring a seamless experience for all users.

To validate the inclusivity and effectiveness of the prototype, conducting extensive usability testing with a diverse group of users is essential. By involving individuals from different age groups, cultural backgrounds, and abilities, valuable insights can be gained regarding usability issues and areas for improvement. The feedback obtained can guide future iterations and enhancements of the system.

As the project evolves, it is vital to address ethical considerations related to user data and privacy. Striving for transparency and ensuring that user information is handled securely and ethically is crucial. A robust privacy policy and mechanisms to obtain informed consent from users should be integrated into the system to protect user rights and build trust among the user community.

In conclusion, while the current computer science project serves as a prototype with inclusive design considerations, future work is necessary to enhance accessibility and inclusivity. This can be achieved by actively involving disabled individuals in the design process, integrating assistive technologies, implementing adaptive interface designs, conducting extensive usability testing, and addressing ethical and privacy concerns. By taking these steps, the project can evolve into a more comprehensive and inclusive solution, benefiting a wider range of users across different demographics.

# **References**

GUIDANCE (text in blue can be deleted from your final submission)

In this section, you **must** reference any sources used in your work. Typically, these sources will have come up during the investigation and related work sections. Your referencing must use the IEEE referencing style [IEEE Citation Guidelines2.doc (ieee-dataport.org)](https://ieee-dataport.org/sites/default/files/analysis/27/IEEE%20Citation%20Guidelines.pdf) .

It is **highly** recommended that you use reference management software such as Mendeley or Zotero.

Many students ask how many references are required. That is like asking how long a piece of string is. Your project should have as many references as is required for it. However, having few references indicates that no thorough investigation has occurred.

# **Appendices**

GUIDANCE (text in blue can be deleted from your final submission)

Appendices appear after references. Your appendices depend on the nature of your project. **Do not assume people will read your appendices.** Even if you direct them to do so in your main text, appendices are considered additional information and should not be relied upon to understand your main body of work. Refer readers to an appendix using a phrase such as *see Appendix A for further details*.

The following documents **must** be included as references:

* Your Project Proposal.
* Your Progress Review Form.
* Your original plan and revised plans as your project evolved.
* A description of how to access any technical output. **It is strongly recommended you use GitHub or something similar to do this.**

Any important communications between you and external stakeholders -- **please ensure private data is removed and communications anonymised.**