Yoganka.pl  
Full-Stack Body Healing  
Web Application

By

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Submitted to

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for the degree of

**BACHELOR OF ENGINEERING IN COMPUTING**

**Date:** Enter the date here

Signed (apply signature below)

**Maciej Mateusz Madejsza**

**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.

Acknowledgements

Here it is customary to thank the people who have supported this work and your studies in general. It is up to you who you thank!

Abstract

GUIDANCE: Up to 300 words

A short summary of your project to include the problem, the main literature reviewed, your implementation and your findings.

Write this after you have finished the entire report!

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# **Introduction**

## Problem Description, Context and Motivation

The primary issue addressed is the limited digital presence and engagement opportunities for BodyHealing, a sole trader yoga instructor in Gdańsk, Poland. Currently, many yoga practitioners like BodyHealing rely heavily on partner venues, such as gyms and cafés, to attract clients, leading to a limited and inconsistent audience. This restricts the ability to build a dedicated and loyal customer base, as many potential clients discover the instructor through external locations rather than through a personalized and professional platform. The problem affects both the instructor, who struggles to maximize her visibility and business potential, and potential clients, who have limited options to directly connect, book, and engage with services online.

This situation is exacerbated by the constraints of social media platforms, which limit customization, engagement tools, and professional credibility. Addressing this problem is crucial as it would allow BodyHealing to establish a centralized, custom web platform that directly attracts clients, fosters professional credibility, and supports secure business interactions such as bookings and payments. Solving this issue would enable BodyHealing to move beyond venue dependency, maximize reach, and create more meaningful and lasting connections with a broader audience. A well-developed digital presence would ultimately lead to enhanced business growth, increased client engagement, and sustainable revenue.

## Aims

The primary aim is to establish a comprehensive digital platform that empowers BodyHealing to reach a wider audience, enhancing visibility beyond the limitations of physical venues.   
 Another goal is to elevate the credibility and professionalism of BodyHealing, providing a modern, well-equipped online presence that stands out in a competitive market where many yoga instructors rely on generic, template-based websites due to budget and skill constraints.   
 Lastly, the website seeks to facilitate seamless user engagement, allowing clients to easily book and pay for classes, driving meaningful business interactions. The final goal is to build a platform that not only supports long-term growth but also positions BodyHealing as a leading, trusted presence in the local yoga scene—going beyond what standard, template websites can offer and truly reflecting the unique quality of her services.

## Objectives

The objectives for this project are clear and actionable. First, collaborate with BodyHealing using Miro to design a visually appealing and intuitive website layout that reflects her brand.   
Next, implement a modern and calming frontend using React, ensuring a seamless and user-friendly experience. Design a scalable database to support a future user hub, enabling advanced features down the line. Develop a robust backend server to manage data and support real-time functionality. Integrate a schedule management system, allowing users to view and book classes with ease. Incorporate secure payment functionality to streamline transactions. Lastly, implement user metrics, allowing clients to track their progress and engagement over time, enhancing the value of the platform and encouraging repeat interactions.   
LIST 1-5 etc.

## Legal

Legal considerations for this project include ensuring GDPR compliance to protect user data, particularly given the website’s European audience. This involves implementing secure data storage, transparent privacy policies, and clear terms of service. Payment integration must comply with financial regulations, ensuring secure transactions through trusted payment gateways. Copyright issues should be addressed by using licensed images, fonts, and digital assets. Additionally, contracts with BodyHealing should outline responsibilities, ownership rights, and confidentiality agreements to protect both parties involved.

## Social

Social considerations for this project focus on inclusivity and accessibility, ensuring the platform is easy to navigate for users of varying ages and technical skills. The design will emphasize a welcoming, calm aesthetic to attract a diverse audience interested in wellness. Additionally, ensuring mobile responsiveness is crucial, as many users may access the site via smartphones. Social media integration will help broaden reach, encouraging community engagement and allowing seamless sharing of content to foster a supportive yoga community.

## Ethical

Ethical considerations for this project include ensuring transparency in how user data is collected, stored, and used, maintaining user privacy and consent in line with GDPR regulations. The platform should promote fairness, providing equal access to services for all users regardless of their background. Additionally, the website's content should avoid any misleading claims about services and ensure that the business practices are honest, such as transparent pricing and clear booking policies, fostering trust between BodyHealing and its clients.

To not play with metrics served to the customer

## Professional

In order to achieve BodyHealing's business goals, professional concerns for this project include upholding high standards of functionality and design. In addition to making sure the website is secure, responsive, and easy to use, the project must be completed on schedule. Working together with the client is essential, and frequent feedback is needed to make sure the design fits her vision and brand. Additionally, in order to provide scalability and future-proofing for features like user hubs, the project must follow industry best practices in web development. Since there is no sensitive research involved and the project's only goal is to improve online visibility and business transactions, ethical clearance is not needed.

## Background

Due to a lack of funding and expertise, many yoga instructors, particularly those in Poland, find it difficult to develop distinctive, expert websites. This initiative fills this vacuum in the market. The goal of developing a completely custom website for BodyHealing is to raise the bar in the yoga industry by offering a cutting-edge and intuitive platform that goes above and beyond the usual template-based options. According to recent studies (**e.g., McKinsey & Company, 2021**), which stress the impact of digital platforms in business success and growth, this project is set within the larger framework of the growing significance of web presence for small businesses.

## Report overview

From here, the report will begin with a literature review that will look at several technology possibilities, followed by a methodology section that will outline the chosen strategy. Implementation and results will outline the project's execution and outcomes, along with an assessment of its effectiveness. The report will conclude with a summary, personal reflections, and recommendations for future work. Work will be completed with references and appendices.

# **Technology Review**

## Technology Review

This section discusses the many technologies considered for the development of the BodyHealing website, emphasizing their significance, benefits, and limitations. The evaluation also gives a rationale for the ultimate technology selection, detailing how each option matches with the project's objectives, the client's requirements, and industry norms.

## Summary of Outcomes of Literature and Technology Review

1. Design and Prototyping Tools

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **Miro** | **Collaborative, visual tool, already used by BodyHealing for planning, great for wireframes and design mockups** | **Limited features in free version, may be less useful once design is complete** |
| Figma | Powerful for UI/UX design and real-time collaboration | Requires subscription for advanced features, unknown for both sides |

Miro was chosen because of its familiarity with the client, BodyHealing, which facilitates collaboration and speeds up initial design conversations. It's great for brainstorming and designing flowcharts or wireframes. Figma provides more advanced design and prototyping capabilities, such as interactive components and design systems, but given the client's choice for Miro, it will not be the primary tool. However, if the project grows, Figma may be reconsidered for more complicated designs.

1. Project Management and Version Control

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **GitHub** | **Centralized location for code, version control, and collaboration. GitHub Projects integrates with tasks** | **Can be overwhelming for beginners if not familiar with version control** |
| Trello | Easy to use, good for task management and tracking progress | Limited advanced features for complex projects |

GitHub was selected for version control and project tracking as it provides an organized and centralized system that supports collaboration efficiently. It is widely regarded as an industry standard, offering robust features for managing code and facilitating collaboration with the client and potential future developers. GitHub Projects offers seamless integration with the codebase, making it the preferred choice for tracking development progress and streamlining task management. While Trello is a viable alternative for simpler task management, GitHub's integrated solution is more suited for tracking code changes and deployments, offering a more comprehensive and cohesive workflow especially when the developer was already familiarized with the tool.

1. Frontend Development: JavaScript (JS) and TypeScript (TS)

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **TS** | **Provides type safety, improves code quality and maintainability** | **Learning curve and longer initial development time** |
| JS | Widely used, well-supported, versatile for frontend and backend | Dynamic typing can lead to runtime errors |
| **React** | **Popular, well-documented, efficient for dynamic UIs** | **Requires deeper understanding of hooks and state management** |
| Vue | Easy learning curve, flexible, great for building scalable interfaces | Smaller ecosystem compared to React, less community support |
| Angular | Robust framework with built-in tools for complex apps | Steep learning curve and slower performance on large apps |
| **SCSS** | **More flexibility and control over styling compared to TailwindCSS** | **Requires additional configuration and might lead to complex CSS** |
| TailwindCSS | Modern, utility-first approach for quick styling | Potential for bloated HTML if not properly structured. Risk of template-look |

Initially, JavaScript (JS) will be used due to its ubiquity and wide support. However, TypeScript (TS) is planned for future migration. TypeScript provides better error handling and is widely used in industry, making it a more future-proof option. The decision to migrate reflects both industry trends and the desire to adopt modern practices that will improve long-term project maintainability.  
 React was selected as the frontend framework due to its widespread industry adoption and community support. It is particularly suited for building dynamic and responsive user interfaces, and its component-based architecture will allow for easy future scaling. Despite alternatives like Vue and Angular, React’s popularity, coupled with prior familiarity, made it the ideal choice.  
 While TailwindCSS is a popular utility-first CSS framework and is great for rapid development, SCSS was chosen for more control over styling. SCSS offers better maintainability and customization, which helps avoid the generic "template" look often associated with Tailwind-based websites. SCSS also provides more flexibility, which is crucial for BodyHealing’s unique branding.

1. Build Tools

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **Vite** | **Fast and lightweight, optimized for modern web development, minimal configuration** | **Newer, so it may have less community support than Webpack** |
| Webpack | Powerful, widely adopted, highly configurable and flexible for various project types | Complex configuration, steep learning curve |
| Gulp | Task runner, integrates well with frontend development tools, simplifies automation | Less suitable for larger projects, slow build times. |

Vite was selected for this project due to its speed and minimal configuration, which aligns with the project's goal of quick, efficient development. Vite provides fast hot-module reloading and better support for modern frameworks like React. While Webpack is powerful, its complexity and configuration overhead make it less suitable for this project, where speed and simplicity are key. Gulp is more suitable for task automation, but its slower build times make it a less attractive option for this particular.

1. Backend Technologies

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **Node.js** | **JavaScript-based, ensuring consistency across both frontend and backend; fast performance for I/O-bound tasks** | **Requires non-blocking programming and may have performance bottlenecks for CPU-heavy tasks** |
| Other Languages ( Python, Ruby) | Mature ecosystems and frameworks, flexibility for various types of web applications | Potential inconsistency with frontend code and less synergy for full-stack development |

Node.js was chosen for the backend due to its uniformity with the frontend, allowing for a streamlined development process using a single language. This ensures better maintainability, especially since the project aims to have a dynamic, interactive user experience. Node.js also aligns with industry practices, where JavaScript is commonly used for both frontend and backend development, making it ideal for a full-stack project. Choosing other languages like Python or Ruby would introduce complexity, context switching and inconsistency in the codebase.

1. Backend Frameworks

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **React Router** | **Provides navigation within React applications, easy to integrate with the frontend** | **Limited to client-side routing, does not handle server-side needs** |
| **Express.js** | **Simple, lightweight framework, great for creating RESTful APIs quickly** | **Requires additional configuration for larger applications** |
| Next.js | Full-stack React framework, includes server-side rendering (SSR) and SEO optimizations. | May add complexity for simple applications |

Express.js was chosen as the backend framework because it is lightweight and provides flexibility in building a custom API for the project. Initially, React Router will be used for client-side navigation. However, as the project evolves, Next.js may be considered for improved SEO and server-side rendering, ensuring better performance and visibility in search engines. This choice provides a balance between flexibility and the potential for scalability.

1. Databases

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **MySQL** | **Reliable, mature database system, easy to integrate and use** | **May struggle with very large-scale data or complex queries** |
| PostgreSQL | Powerful and scalable, better for complex queries and larger datasets | Requires more configuration and management than MySQL |
| NoSQL Databases | Scalable and flexible, suitable for unstructured data | Not ideal for applications requiring relational data |

MySQL was chosen as the database due to familiarity, and it is a reliable relational database. Given the project’s needs and the relatively straightforward data structure, MySQL is ideal. Alternatives like PostgreSQL or NoSQL databases were considered, but MySQL’s balance between simplicity and robustness made it the preferred option.

1. Hosting Services

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| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **OVH Cloud** | **Popular in Poland, offers a range of hosting plans, good support for small businesses** | **May not be as well-known internationally as other providers, more complex than other platforms like AWS or Azure** |
| Other Hosting Services | Reliable services with strong international presence, flexibility in deployment | Have higher costs and less local support |

OVH Cloud was chosen as the hosting provider due to its strong presence in Poland, where BodyHealing is located. It provides reliable hosting at an affordable price point, which aligns with BodyHealing’s needs. Additionally, OVH offers good customer support and scalable solutions, ensuring that the website can grow with the business.

1. Design and Media Tools

|  |  |  |
| --- | --- | --- |
| **Technology** | **Benefits** | **Limitations** |
| **Adobe Photoshop** | **Powerful, industry-standard tool for design and media processing** | **Expensive and has a learning curve** |
| Free Editors | Affordable, accessible for beginners, many options available | Limited features compared to Photoshop, may not support advanced tasks like automation |

Adobe Photoshop was selected for media editing due to its powerful feature set, which is essential for creating high-quality visuals for the website. Since BodyHealing already owns a license for Adobe products, it makes sense to use Photoshop for all design and media tasks, ensuring a professional and polished automated outcome. Free editors, while useful, cannot match the capabilities and flexibility offered by Adobe.

Conclusion

This technology assessment has offered a thorough analysis of the various tools and technologies available for developing the BodyHealing website. Miro, GitHub, JavaScript/TS, SCSS, React, Vite, Node.js, Express.js, MySQL, and OVH Cloud were chosen based on their compatibility with the project's objectives, BodyHealing's requirements, and industry best practices. These decisions ensure a balanced approach that incorporates modern development standards, user-centric design, and scalability for future expansion.

The critical review of various technologies emphasized the necessity of choosing tools that provide a good combination of usefulness, convenience of use, and long-term viability. These decisions lay the groundwork for a successful project implementation, resulting in a distinctive, advanced web platform that satisfies the demands of BodyHealing and its clients.

# **Methodology**

GUIDANCE: Up to 1000 words

This section should answer the question -- **how are you going to undertake the project?**

Describe HOW you are going to create your artefact, including any tools, design methods, data gathering methods, algorithms etc that you are going to use. Tell us WHY you have chosen these methods in favour of others (with reference to the findings of your literature and technology review).

This section should include the following subheadings:

* Design
* Testing and Evaluation
* Project Management
* Technologies and Processes

**Refer to the Project Report Builder on Moodle for content that you should include in this section.**

# **Implementation**

GUIDANCE: Up to 3000 words

Finally, you can tell us WHAT you did, i.e. How did you apply the methodologies you have described in the section above to your actual problem.

This part can be very descriptive but please avoid excessive detail.

Some strategies that can help you write this part:

* Choose a writing style (e.g., first, second, or third-person perspective).
* Start this section with any design work you might have done e.g., System design/architecture, UX design artefacts etc.
* If you divided your work into sprints, that can be a good structure for this section.
* Only include code snippets for particularly challenging parts of your implementation.
* Pick out a few difficult problems you had to solve and tell us in detail how you solved them. This brings your experience to life.

**Refer to the Project Report Builder on Moodle for content that you should include in this section.**

# **Evaluation and Results**

GUIDANCE: Up to 2000 words

This is an important section where you weigh up the strengths and weaknesses of your artefact.

Guidance: If your project has a user-facing element, we expect to see some kind of evaluation of this with representative intended users, for example a ‘think aloud’ usability test.

You can also apply standard metrics for the domain you are working in and see how you have done against them. **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.

This section should include the following subheadings:

* Related Work

**Refer to the Project Report Builder on Moodle for content that you should include in this section.**

# **Conclusion**

GUIDANCE: Up to 1500 words

The conclusion summarises the project. Start by summarising the overall outcome of your project and to what extent the aims and objectives have been met. You need to highlight your key outputs and/or discoveries.

The following subsections that must appear in your conclusion.

## Future Work

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?

This is an important section, and it helps us understand what you have learned by doing the project and allows you to show you understand what a more ideal solution might look like, outside the constraints of the MSc Project timeframe.

## Reflection

You must critically reflect on the entire project process and how well you have worked on the project. What particular things have you learned during the project? Why were you able and unable to meet project goals? What would have you done differently in hindsight?

**Refer to the Project Report Builder on Moodle for content that you should include in this section.**

# **References**

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 RefWorks that is provided by the university. Your project should have as many references as is required. However, having few references indicates that no thorough investigation has occurred.

It is your responsibility to ensure that you have actually read all the material you reference, and that the references provided in your report are legitimate and **NOT AI generated**.

highlighted in recent studies (e.g., McKinsey & Company, 2021) – from introduction

# **Appendices**

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.
* Evidence of your use of a project management tool.
* 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.**