LEADING UNIVERSITY

LEADING UNIVERSITY, SYLHET
Dept. of Computer Science & Engineering

Report on

Build the frontend of a website using HTML, CSS, and Bootstrap

Course Title: Web Technologies

Course: CSE-4116

Submitted to:

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Abstract: This project showcases the process of transforming a Figma-based UI design into a responsive, functional web page using HTML, CSS, and Bootstrap. The core objective is to accurately translate visual design concepts into clean, maintainable front-end code while ensuring a seamless user experience across various devices. The development process focuses on building a structured layout, implementing precise styling, and ensuring responsiveness and interactivity according to the original design specifications. This project highlights the practical application of front-end technologies and reinforces the essential bridge between UI design and web development.

Acknowledgement: I would like to sincerely thank my supervisor, faculty members, and fellow peers for their continuous guidance, valuable feedback, and constant encouragement throughout the course of this project. Their constructive suggestions have been crucial in enhancing both the technical quality and visual fidelity of the final output. I am especially grateful to those who reviewed my work and shared insights that helped me improve my design-to-code workflow. I also extend my heartfelt thanks to my family and friends for their emotional support and motivation throughout this journey.

Dedication: I wholeheartedly dedicate this project to my dear family and close friends. Their unwavering support, endless motivation, and belief in my potential have been a driving force behind this achievement. Their encouragement gave me the confidence to overcome challenges and stay committed to delivering a quality outcome. This accomplishment is a reflection of their love and faith in me.

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Introduction: In the modern digital landscape, the role of an engaging and responsive website is more critical than ever. It serves not only as a platform for interaction but also as a reflection of a brand's identity and values. This project showcases how a visual prototype created in Figma can be effectively translated into a live, responsive website using core web technologies like HTML, CSS, and Bootstrap. The aim is to ensure visual accuracy and usability across different devices while bringing the design vision to life through clean and structured code. This process highlights the essential connection between user interface design and front-end implementation.

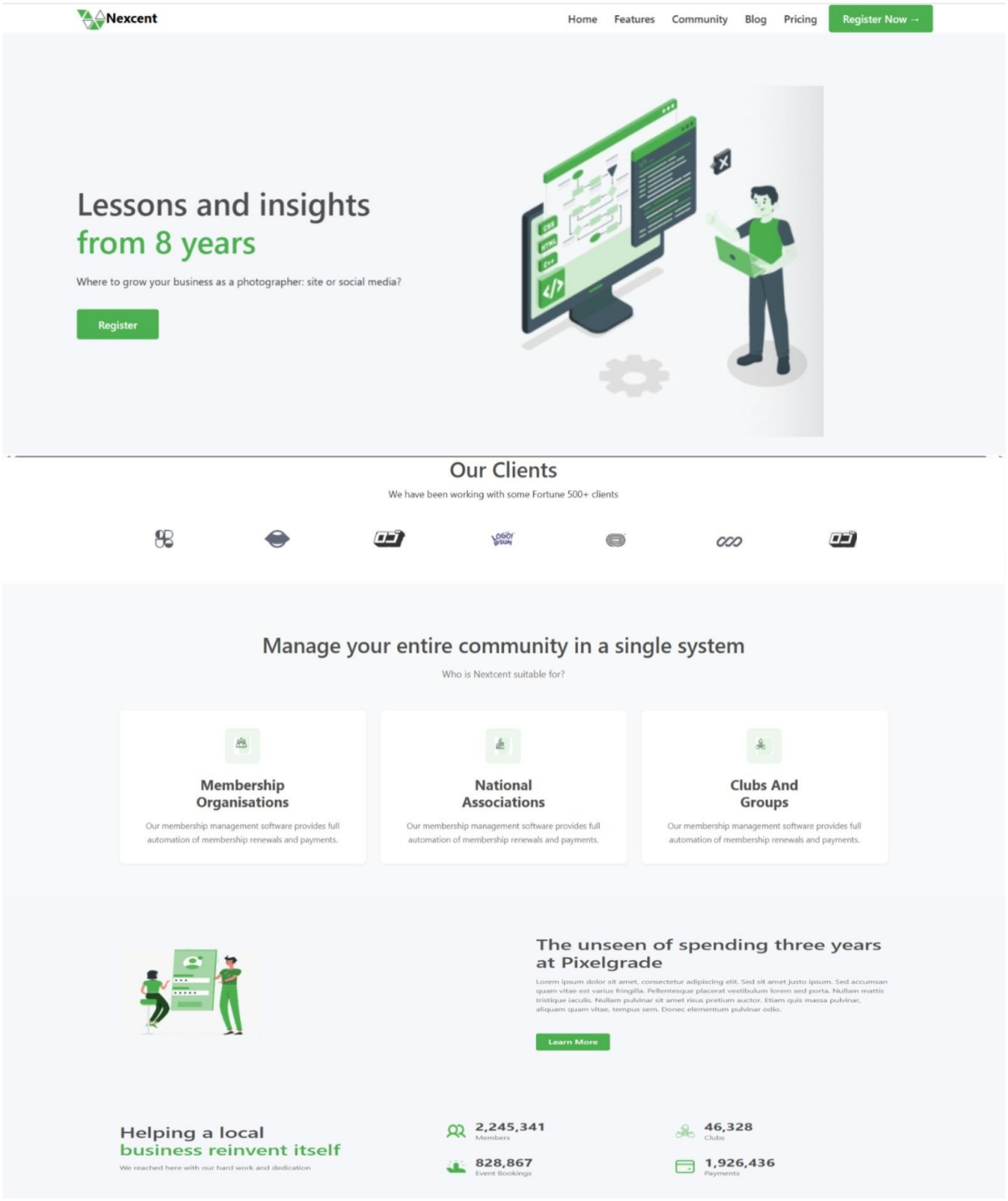
Motivation: This project was inspired by a desire to gain practical experience with front-end development and strengthen the ability to work with real-world design files. Turning a static design into a responsive website offers a meaningful challenge that enhances coding skills and promotes better understanding of layout principles. It also mirrors common workflows in professional web development environments. Through this hands-on task, I sought to sharpen my HTML and CSS capabilities, become more comfortable with Bootstrap’s system, and learn how to effectively bring UI designs into functional form while preparing for collaborative team scenarios involving both designers and developers.

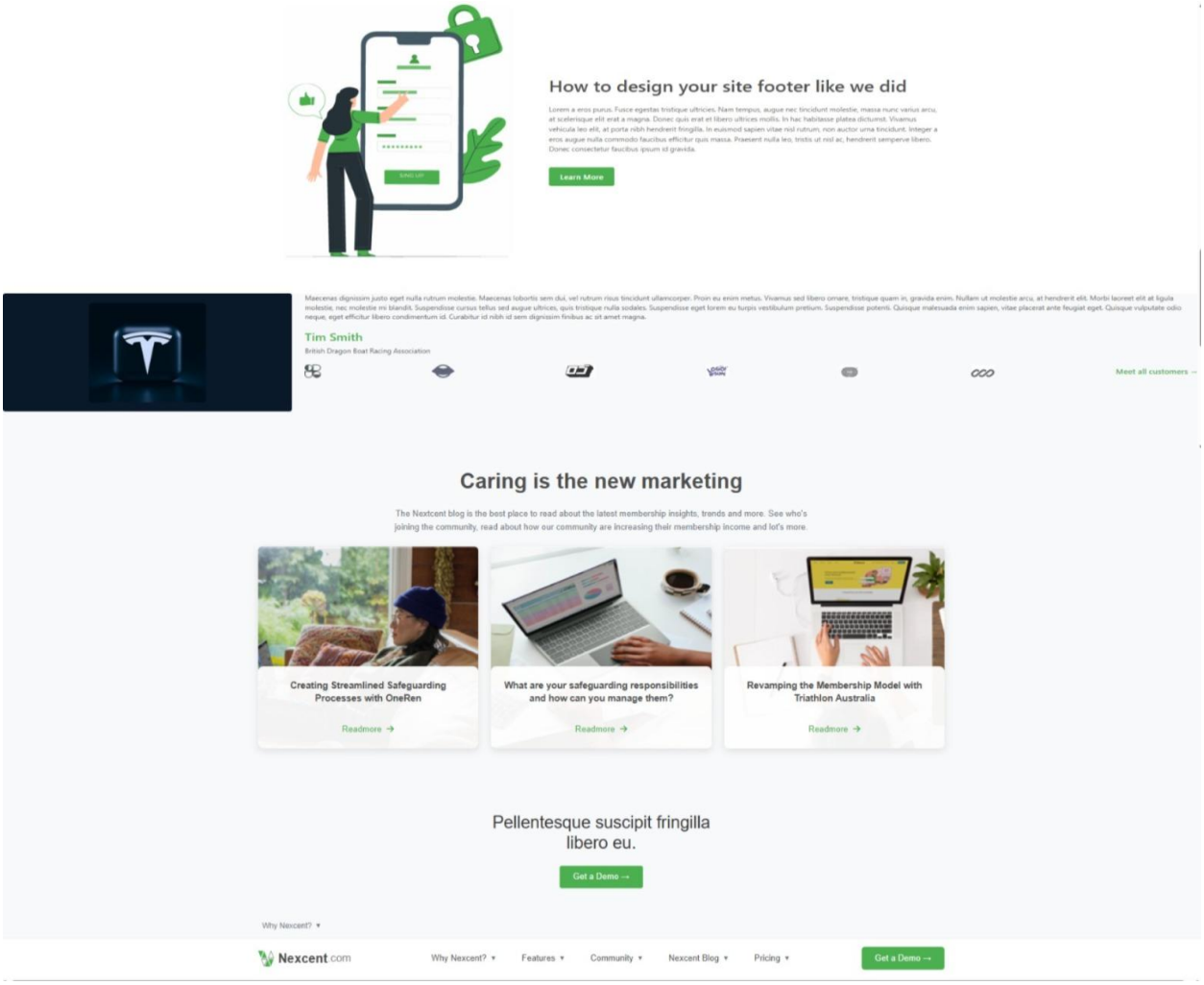
Background Study: Figma is a leading interface design platform, widely used for its collaborative features and powerful design tools that help teams build user-friendly layouts and prototypes. On the technical side, HTML provides the structure of a webpage, defining its content and layout. CSS is used to add visual styling—like colors, fonts, and spacing—making the content more attractive and consistent with the design. Bootstrap, a responsive front-end framework, simplifies layout management and offers a library of reusable components to speed up development. Gaining fluency with these tools is vital in today's web development landscape, especially for building responsive and design-consistent applications.

Methodology: To carry out the transformation from design to webpage, the project followed a well-defined, structured approach:

1. **Design Analysis in Figma**: I began by studying the design file, identifying the structure, color palette, typography, and interactive elements to be replicated.
2. **HTML Markup Creation**: The basic framework of the webpage was constructed using semantic HTML tags to lay down the content and key sections such as headers, buttons, and containers.
3. **CSS Styling Implementation**: Custom styles were crafted with CSS to bring visual fidelity to the original design. Particular attention was given to spacing, alignment, hover states, and typography.
4. **Responsive Layout with Bootstrap**: Bootstrap's grid system and utilities were incorporated to make sure the site adapts smoothly to different screen sizes and devices.
5. **Testing and Refinement**: The final step involved reviewing the site on various devices and browsers to fix any layout or responsiveness issues, ensuring a polished and consistent appearance.

Screenshot of Web Page





Conclusion:

This project successfully showcased the transformation of a user interface design created in Figma into a responsive and interactive web page using HTML, CSS, and Bootstrap. Throughout the development process, I focused on writing clean and organized code while ensuring that the final output closely matched the original design. The experience highlighted the critical role of responsiveness in web design and how essential it is for websites to perform well across different screen sizes and devices.By engaging with real-world tools and workflows, I deepened my understanding of front-end development principles and techniques. I also recognized how essential seamless collaboration is between UI/UX designers and developers in order to deliver intuitive and visually consistent websites. This project not only strengthened my technical skills but also improved my appreciation for the design-to-code pipeline in modern web development environments.