

FIU Knight Foundation School of Computing

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Cybersecurity Essentials Training Platform

Student: Ryan Blanco

Mentor: Masoud Sadjadi

Instructor/Faculty: Masoud Sadjadi, Florida International University

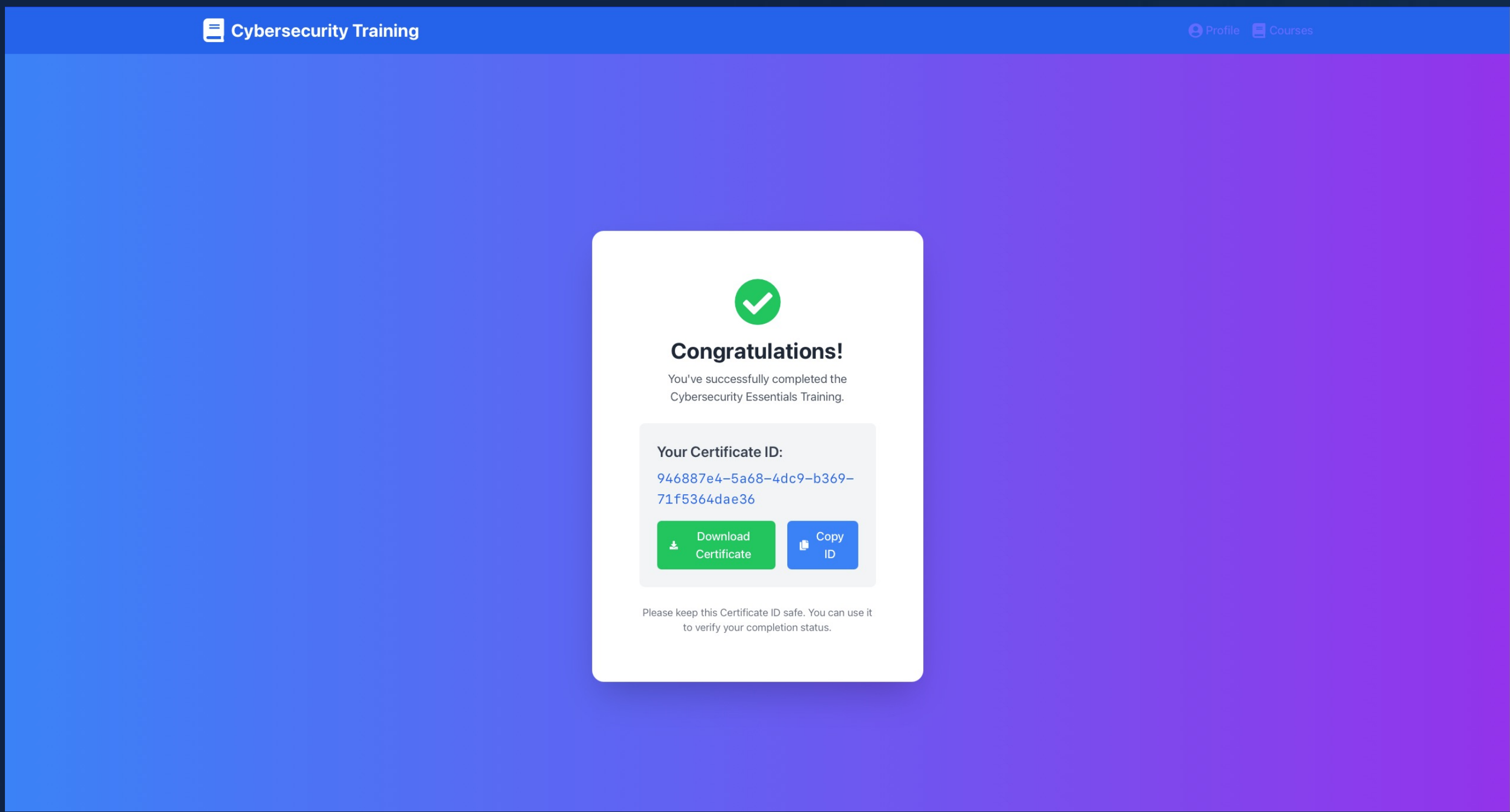
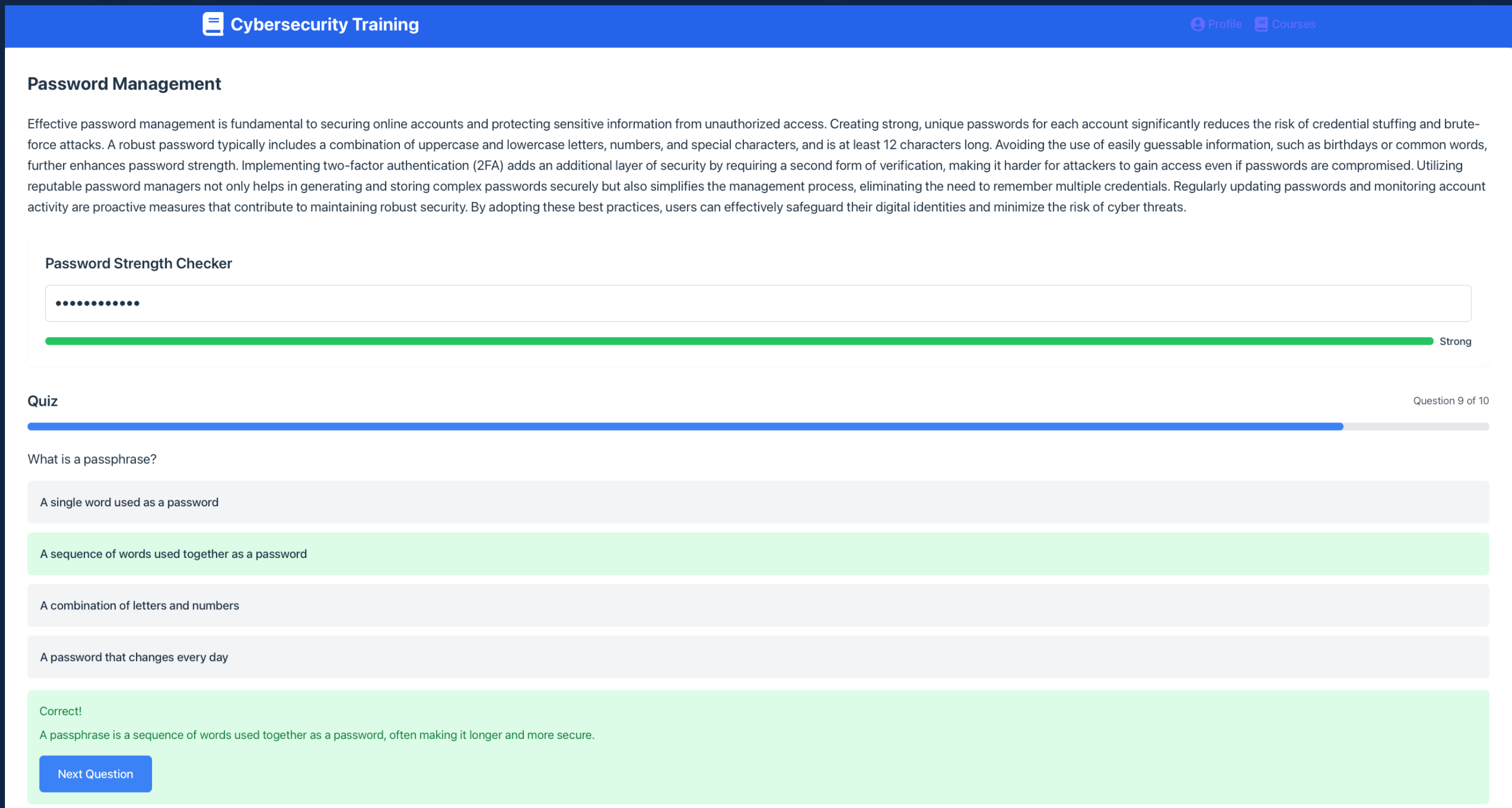
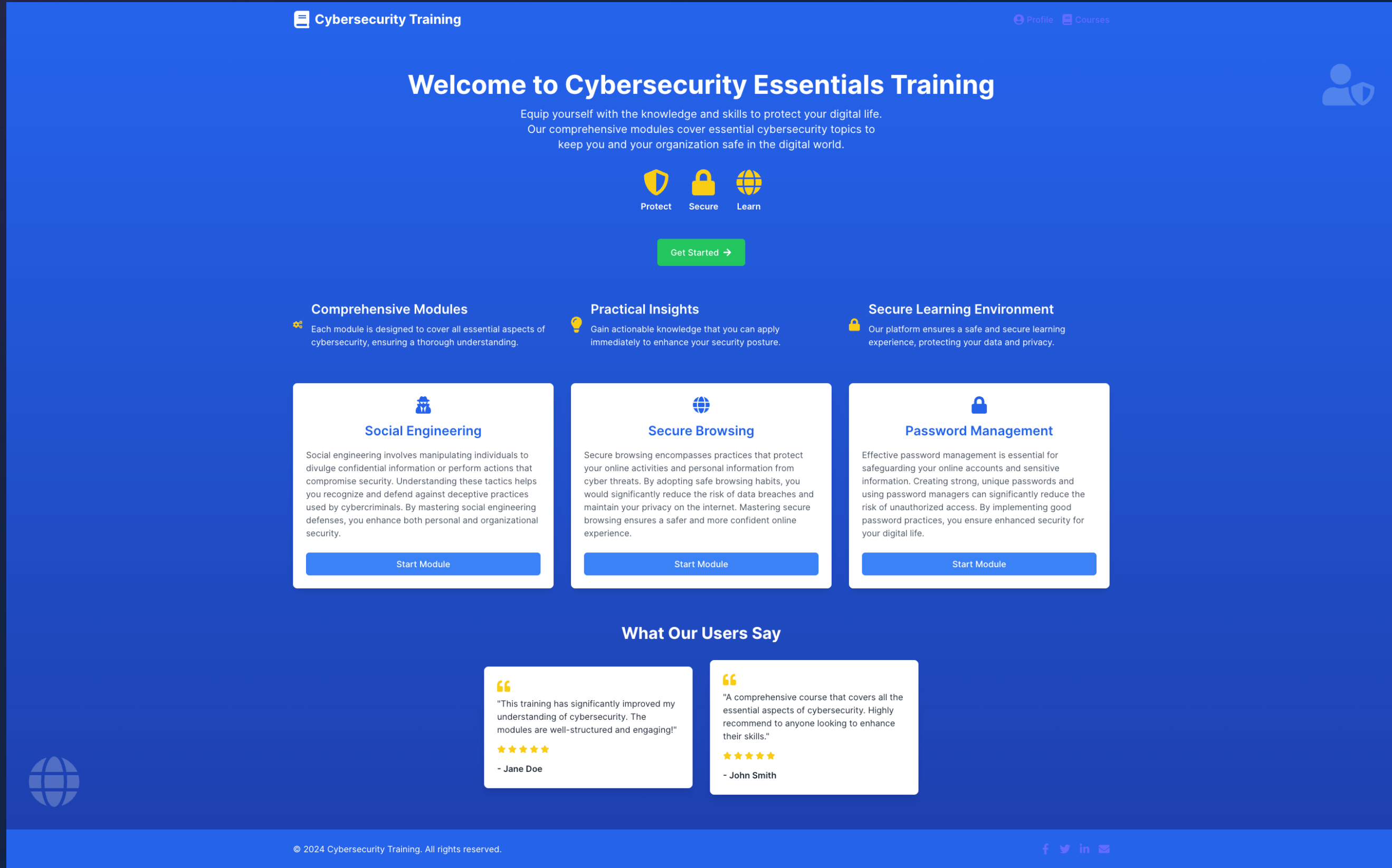
WEB APP COURSE DESIGN

PROBLEM

Low cybersecurity literacy among employees poses significant risks to organizations and individuals, leading to financial losses, privacy breaches, and reputational damage. Many employees lack the knowledge needed to recognize and mitigate cyber threats such as phishing, weak password practices, and unsafe browsing behaviors. In an increasingly digital world, the importance of cybersecurity knowledge extends beyond the workplace; it is essential for everyone to safeguard their personal information and devices. As cyber threats grow in sophistication and frequency, the risks are no longer confined to large organizations—individuals and small businesses are becoming frequent targets. Studies show that organizations investing in targeted cybersecurity training for individuals can substantially reduce the likelihood of breaches, enhance organizational resilience, and create a culture of security awareness. Equipping people with essential cybersecurity knowledge is not just a corporate necessity but a societal imperative to combat the ever-expanding landscape of digital threats.

SYSTEM DESIGN

The **Cybersecurity Essentials Training Web App** is an interactive and user-friendly platform designed to address the critical need for cybersecurity literacy among individuals with little to no knowledge of the topic. Featuring comprehensive modules on core areas like Social Engineering, Secure Browsing, and Password Management, the app provides practical insights and hands-on tools such as a password strength checker and quizzes to reinforce learning. The intuitive design ensures that users can easily navigate the content and track their progress, culminating in a completion certificate to validate their newfound skills. By breaking down complex cybersecurity concepts into digestible lessons, this platform empowers users to safeguard their digital identities, mitigate risks, and adopt best practices in an increasingly threat-prone digital landscape. Designed to educate users on the fundamental principles of cybersecurity in a straightforward and engaging manner, the app ensures that even those with no prior technical experience can confidently apply essential security practices. This accessible approach makes it an invaluable resource for fostering a culture of cybersecurity awareness in both personal and professional contexts.



IMPLEMENTATION

The **Cybersecurity Training Platform** is a React-based web application designed to provide interactive training modules on essential cybersecurity concepts. The app uses modern React features like useState and useEffect hooks for state management, allowing dynamic rendering of components such as the LandingPage, Module, and Certificate. Users progress through the training by completing modules tracked via the completedModules state, and upon finishing all modules, a unique certificate ID is generated using the uuid library and stored in localStorage for persistence across sessions. The LandingPage serves as the entry point, dynamically displaying available modules, while the Module component handles quizzes and learning content for each topic. Tailwind CSS is used for responsive, visually appealing layouts, while the use of localStorage ensures user progress and certificates remain accessible. The application design is modular, making it easy to scale by adding new modules or enhancing existing functionality with minimal code refactoring. Overall, the platform combines modern web technologies, intuitive navigation, and robust state management to effectively educate users with little to no cybersecurity knowledge, bridging critical knowledge gaps in an engaging way.

SUMMARY

The **Cybersecurity Training Platform** is a modern web application designed to address the critical need for improving cybersecurity literacy among individuals with little to no prior knowledge. Built using React, the platform provides a seamless and interactive learning experience through modular components such as LandingPage, Module, and Certificate. Users progress through comprehensive training modules on topics like Social Engineering, Secure Browsing, and Password Management, with their progress dynamically tracked via React's state management features. The app utilizes Tailwind CSS for responsive, user-friendly layouts and ensures user data persistence through the uuid library and localStorage, enabling the generation and retrieval of unique certificates upon course completion.

The platform is designed with scalability and accessibility in mind, allowing new modules or features to be added effortlessly while maintaining a consistent and intuitive user experience. By breaking down complex cybersecurity concepts into digestible lessons and incorporating practical tools like quizzes and a password strength checker, the app empowers users to adopt essential security practices. Its overarching goal is to bridge the gap in cybersecurity knowledge, equipping individuals with the skills to protect themselves and their organizations in an increasingly digital and threat-prone world. Combining cutting-edge web technologies and a focus on usability, the Cybersecurity Training Platform provides an engaging, scalable, and impactful solution for fostering a culture of security awareness.