**INTERNSHIP REPORT**



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# **Introduction**

## **Organization Background:**

### **Forage:**

Forage is an online platform that offers virtual internships and work experience programs in collaboration with leading companies and organizations worldwide. It provides students and professionals with the opportunity to gain practical skills and industry experience through immersive virtual internships in various fields. Forage aims to bridge the gap between education and the workforce by offering interactive and practical learning experiences.

**SAP:**

SAP, headquartered in **Walldorf, Germany**, is a multinational software corporation that specializes in **enterprise software solutions**. With a rich history spanning over four decades, SAP has become one of the world's leading providers of enterprise software and related services. The company's products and solutions are designed to help businesses streamline their operations, enhance productivity, and drive innovation.

The collaboration between **Forag**e and **SAP** in offering the **Cybersecurity Engineering Virtual Internship program** demonstrates their commitment to empowering individuals with practical skills and knowledge in the field of cybersecurity. By leveraging Forage's virtual internship platform and SAP's expertise in enterprise software and cybersecurity, the program provides participants with a unique learning experience that prepares them for the challenges and opportunities in the cybersecurity industry.

## **Overview:**

The Cybersecurity Engineering Virtual Internship program, offered by Forage in collaboration with SAP, is a comprehensive learning experience designed to provide participants with practical skills and knowledge in the field of cybersecurity. This virtual internship program aims to bridge the gap between theoretical knowledge and real-world application by immersing interns in hands-on tasks and projects related to cybersecurity.

### **Objectives of the Internship Program:**

### **Practical Application of Cybersecurity Concepts:**

The internship program aims to enable participants to apply their theoretical knowledge of cybersecurity in practical scenarios. By working on authentic tasks and projects, interns gain a deeper understanding of the concepts, tools, and techniques used in the field of cybersecurity.

### **Skill Development:**

The program focuses on developing a range of essential skills required in the cybersecurity domain. Interns can enhance their skills in areas such as password security, phishing detection, server hardening, data analysis, and vulnerability assessment. Through practical experience, participants can develop critical thinking, problem-solving, and decision-making skills necessary for a successful career in cybersecurity.

### **Exposure to Industry Best Practices:**

The internship program exposes participants to industry best practices and standards in cybersecurity. Interns are encouraged to follow established frameworks and guidelines, such as the NIST Password standards, to assess and strengthen security measures. This exposure helps interns align their knowledge and practices with industry standards and enhances their ability to address real-world cybersecurity challenges.

### **Collaboration and Communication Skills:**

Effective collaboration and communication are crucial in the cybersecurity field. The internship program provides opportunities for interns to work in teams, collaborate with colleagues, and effectively communicate their findings, recommendations, and solutions. By engaging in collaborative projects, participants develop teamwork skills, learn to navigate diverse perspectives, and practice clear and concise communication.

### **Understanding the Impact of Cybersecurity:**

The internship program aims to deepen interns' understanding of the impact of cybersecurity on organizations and society. Through tasks such as security analysis and vulnerability assessment, participants gain insights into the potential consequences of cybersecurity vulnerabilities and the importance of robust security measures in protecting sensitive data, systems, and infrastructure.

By achieving these objectives, the Cybersecurity Engineering Virtual Internship program equips participants with the knowledge, skills, and practical experience needed to excel in the field of cybersecurity. The program empowers interns to make meaningful contributions to organizations' security initiatives and prepares them for future roles in the ever-evolving field of cybersecurity.

# **Internship Overview**

## **Internship Details:**

**Cybersecurity Engineering Virtual Internship Program**

 

**Duration:** 1st Jan 2023 – 1st March 2023

## **Internship Tasks & Objectives:**

The Cybersecurity Engineering Virtual Internship program provided by SAP and Forage offered a comprehensive learning experience in the field of cybersecurity. This internship report highlights the tasks completed during the internship period, including an overview of each task and the skills acquired.

### **Task 1: Protect the keys to the kingdom!**

**Task Description:**

The objective of this task was to identify weak passwords based on the NIST Password standards from a given dataset of employees.

During this task, I analyzed the provided dataset and implemented the NIST Password standards to identify weak passwords. By applying my knowledge of password security and encryption techniques, I successfully determined vulnerable passwords within the dataset.

### **Task 2: Gone Phishing**

**Task Description:**

The task involved distinguishing between phishing and non-phishing emails using various techniques learned during the internship.

In this task, I utilized the acquired knowledge and techniques to analyze a set of emails. Through careful examination, I identified potential phishing attempts and classified them accordingly. This task allowed me to enhance my skills in email security and phishing detection.

### **Task 3: Harden your system!**

**Task Description:**

The objective of this task was to configure the firewall and authentication system of a Microsoft 2019 server to safeguard it against various cyber-attacks.

During this task, I focused on strengthening the security measures of the Microsoft 2019 server. I configured the firewall settings to restrict unauthorized access and implemented robust authentication mechanisms. By doing so, I aimed to enhance the server's resilience against potential threats and vulnerabilities.

### **Task 4: Final Analysis and Recommendations**

**Task Description:**

This task involved conducting a comprehensive analysis of provided data to identify cybersecurity loopholes within the organization. Additionally, recommendations were formulated to address these vulnerabilities.

In this task, I thoroughly examined the given data and conducted a detailed analysis of the organization's cybersecurity posture. Based on the findings, I prepared a comprehensive report highlighting the identified loopholes and their potential impact. Furthermore, I proposed actionable recommendations to mitigate these vulnerabilities and enhance the overall security of the organization's systems and processes.

# **Conclusion**

The Cybersecurity Engineering Virtual Internship program provided by SAP and Forage offered a valuable learning experience. Through the completion of various tasks, including password analysis, phishing detection, server hardening, and security analysis, I gained practical knowledge and skills in the field of cybersecurity.

This internship enabled me to understand the importance of robust cybersecurity measures and their significance in protecting organizational assets. The hands-on tasks provided a platform to apply theoretical knowledge to real-world scenarios and develop critical problem-solving skills.

Overall, the internship experience has been highly rewarding, equipping me with practical skills and knowledge that will prove invaluable in my future endeavors within the field of cybersecurity.