Jared Jacobs

**Ethical Hacking for Cyber Security**

Ethical hacking improves cyber security by deciphering many of the encryption methods we use to protect our important data such as usernames, passwords, and credit card information. *John the Ripper,* password cracking software tool, is used to help understand some potential vulnerabilities our systems holding private information that would be devastating if obtained by the wrong hands, such as black hat hackers who would want to use this data unlawfully. This allows ethical hacking to further improve our data’s security everyday by understanding the vulnerabilities that our password hashes may have from *John the Ripper.* Due to advancements in technology and software, this puts even more private information that needs to be secured and unobtainable by potential threats.