Next Generation Coding Network

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Introduction

Over the course of the Spring 2021 semester, I took part in (and I am currently still working in) a program called Next Generation Coding Network, and I enrolled in CPSS240 to coincide with the project.
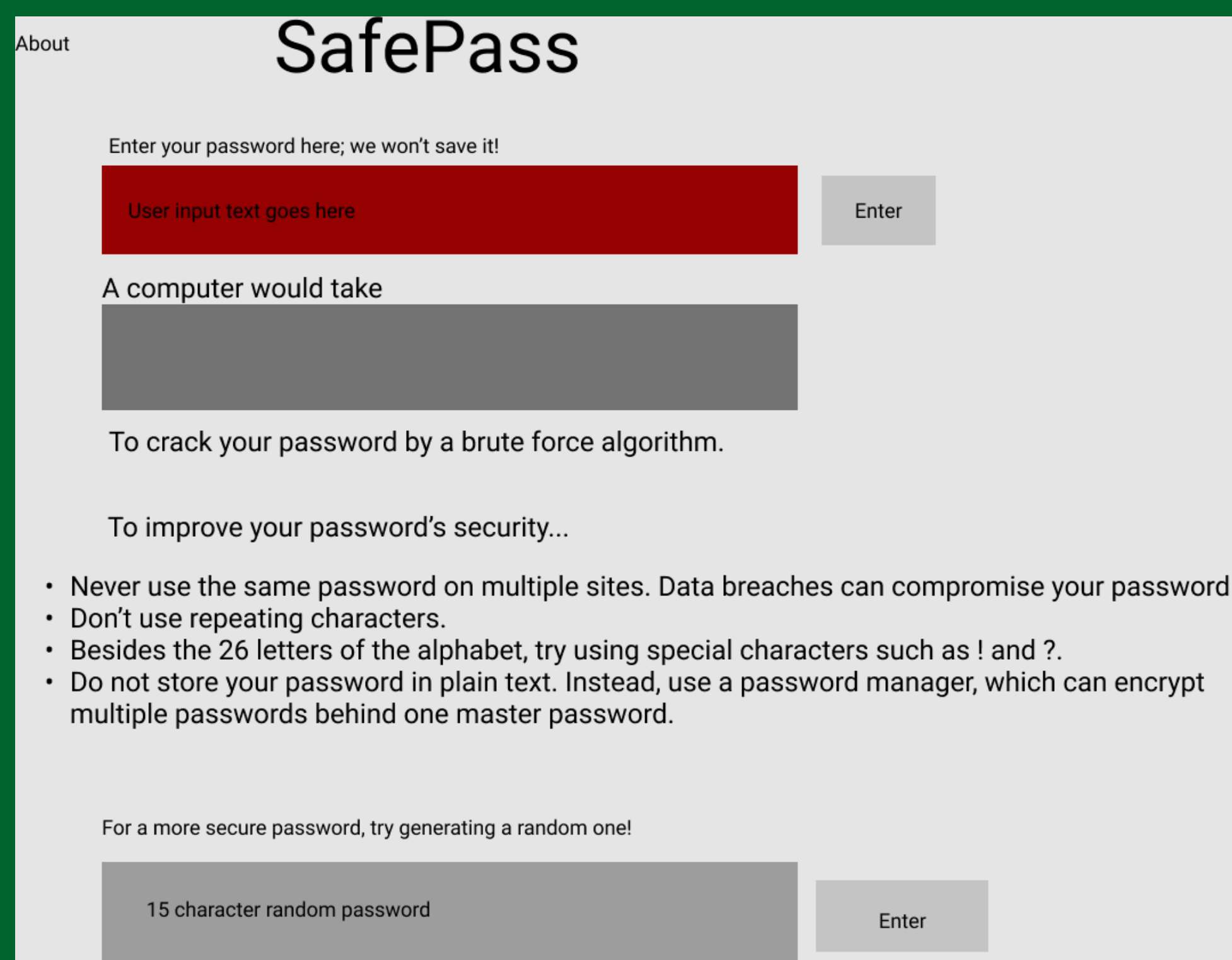
Project can be found at: https://github.com/hadeelsala7/team-27

Since the project is not yet finished, above is a prototype image created via figma.com.

Site Information:

Next Generation Coding Network was conducted largely over Google Meets, Zoom calls, WhatsApp, and the Indiana University Purdue University Indianapolis Canvas site, where which we completed various modules to help us on the project.

Issues Confronting Site:

We focused on several different Grand Challenges, with our group focusing particularly on Securing Cyberspace. The Grand Challenges are global problems facing human society currently. By focusing our efforts on them, we can help alleviate the issues they cause the world.
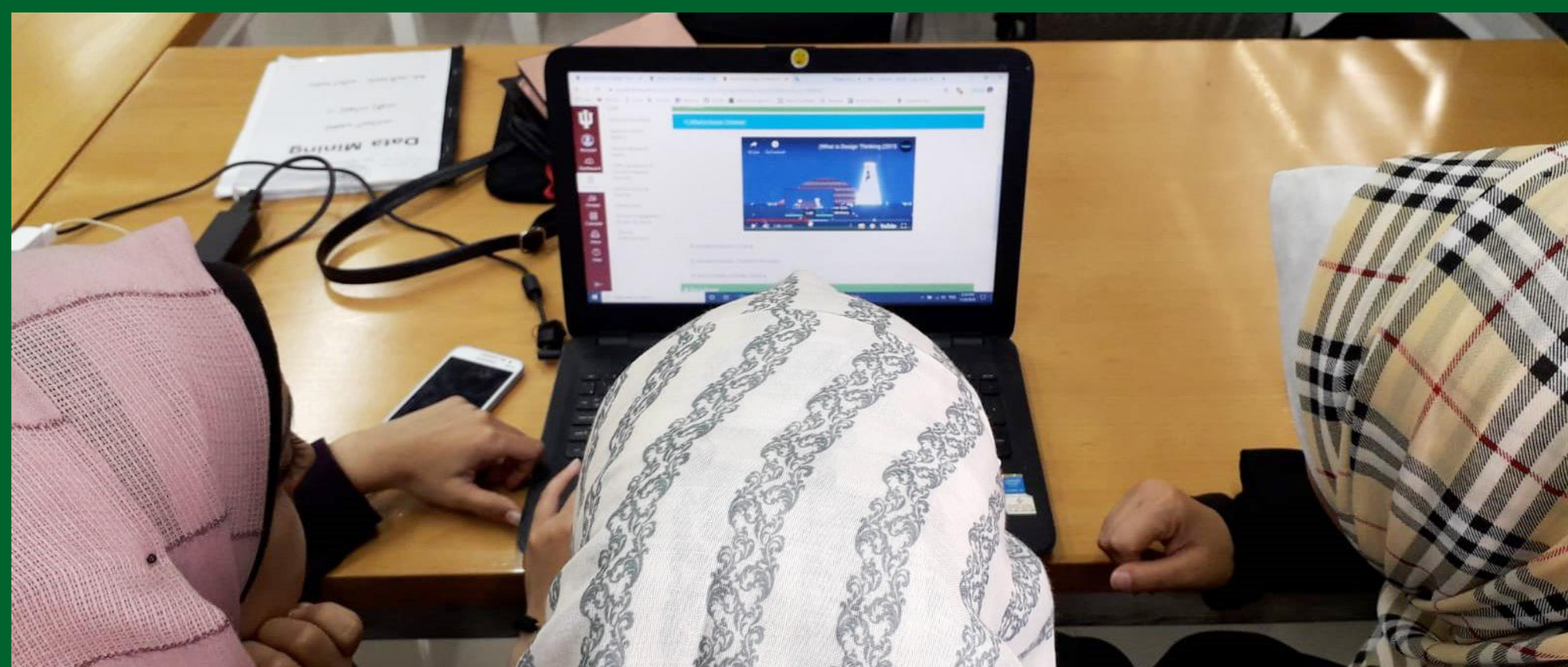
Activities:

The group project itself is conducted in groups consisting of 1-2 UMD students as well as several international students from the Middle East. Before the project itself started we learned how to better communicate across cultures, as well as project design and various methods to complete our project. The topic we chose relates to cybersecurity, and we are making a simple website that helps test password strength. I was responsible for design, as well as writing the text on the About page.

Impact:

While our project is relatively small-scale, securing cyberspace is a challenge of our time. Anything to help in the fight against cybercriminals and thieves.

NGCN members in Gaza utilizing the IUPUI Canvas (Image courtesy of worldlearning.org)

Discussion:

We're interested in receiving feedback from users, along with ways to improve the algorithms for both password checking and password generation. We must make sure that the inputs are sanitized as well to prevent (ironically) an attack from a user. In addition, the layout might warrant improvement. In addition, along the way we had a few hiccups such as a lack of communication between group members. Thankfully we could get these issues sorted by the time we needed to.

Future Work:

In the future we could collaborate again on a larger scale project, as the project we are working on currently is quite small in scale and impact. Giving users the ability to holistically verify their password strength is important and will hopefully prevent accounts across the web from being compromised.

Acknowledgments:

I'd like to thank Drs. Holtz & Merck, my fellow group member/UMD student Ethan Coates, my group facilitator Hadeel Salah, and the staff at STS for bringing the entire course/program together, and for giving me the opportunity to partake.