

Team 2

Team Name:

Silver Cyphers

Team Members

Name:

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browserbot

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Application Name:

S1LV3R C1PH3R

Application Description:

We will be creating an encoder that will be able to encrypt and decrypt messages between friends using a variety of methods. You will be able to enter a keyword in order to use a vigenere cipher. Enter a number in order to change each letter in a statement by that many letters in the alphabet Ex: when the input is 2 then A -> C. We will also include a morse code translation option using dashes and dots.

We are going to be using javascript on the backend in order to encrypt / decrypt messages with html acting as the front end. We chose this since most of us felt more comfortable with javascript as opposed to another language like python. The project will also be using electron to act as a desktop app as opposed to acting as a website.

Vision Statement:

For anyone who has sensitive information that they wish to remain private.

S1LV3R C1PH3R is a cryptography software that enables people to safely and privately share messages.

Unlike other methods of conversing over the web that use 2FA or no security at all, our system allows users to encode messages of any nature and share them without the use of the application, such that the recipient can then use our software to decrypt the message using a unique identifier.

Version Control:

<https://github.com/CSCI-3308-CU-Boulder/209-2-FA20>

Development Method

Our team will be primarily using a Scrum centric approach. Our development will take place in a series of sprints, in which we provide a minimum viable product and during each sprint iterate over the development process to incrementally improve the software.

Communication Plan:

We plan on making a Discord server with which we will communicate through. The server link to the Discord is <https://discord.gg/JFrKFfa>. We will make sure to communicate with each other when we have updates on a task that we are working on. Communication should also be expected when a team member has a question or needs help.

Meeting Plan

Our group will meet at 6:00 - 8:00 on Thursdays using discord.
Group meeting with Karthik 1:30 - 1:45 on Friday over Zoom.

Proposed Architecture Plan

Electron to turn our software into a computer application, HTML to make it a website

- Cryptography through Javascript on the back end
- GUI and inputs are made with HTML on the front end
- Electron to turn our html into a desktop app.

The front end will take in user input and pass it to the javascript which will process the input before returning it to the html which is used by Electron.

Use case Diagram

Actors- sender, spy, receiver

- Use Cases-
- 1.The neighbor wants to talk to his neighbor so he uses a flashlight and the neighbor uses the program to decode it.
 - 2.A person who is kidnapped wants to get help so she knocks on the wall and the person on the other side uses it to decode it.
 - 3.Two people in a quiet room want to talk so they blink to each other using the program to encrypt and decrypt.
 - 4.A family member wants to write something that is very important so they write it in some code and the other member uses it to decode it.
 - 5.Two allies in a game where the group agreed no allies tap their finger on the table so that only the other one understands it.
 - 6.A person is cheating on a significant other but the significant other finds it and uses our program it to find out what they were sending to each other.
 - 7.A defendant on trial blinks to his lawyer when he gets caught in a lie, the lawyer uses the program to encrypt and decrypt.
 - 8.Two undercover cops in a risky situation use the tapping of their feet to communicate, using the program to encode and decode.
 - 9.A hearing person who doesn't know sign language decides to blink in order to communicate with a deaf person, using the program to encrypt and decrypt.
 - 10.A man watching his accomplice rob a jewelry store at night flashes a laser beam on and off to communicate, using the program to encrypt and decrypt.

11. Two fishermen are across a lake and use the swinging of their poles to communicate and use the program to encrypt and decrypt.

12. During a conversation your friend slips you a note with a coded message on it and whispers "cow" using that word as the key on the program you are able to decode the message.

13. During a group conversation you want to pass an idea that might be controversial so you write it on a paper and the person you give it to decodes it.

14. You write a message about a secret to yourself in code and leave a note next to it that says "17f" you then decode the message by going 17 letters forward in the alphabet.

15. You are bored and you have nothing to do so you use our program to test encryption methods.