Cracking The Enigma - WIP 21.8.2022 edition

# **Project description**

This project utilizes the Java language to observe the Enigma machine, how it operates, cracking the machine and much more.

More information on the Enigma machine and how it works: https://www.youtube.com/watch?v=ybkkiGtJmkM

As of now, the project will be divided to three versions:

1. A console application. It allows a user to:

* Load a machine from a scheme-based XML file or previously saved machines.
* Set the machine up for use either manually (picking which rotors to use and in which order, which reflector to use, etc.) or randomly.
* Encrypt messages.
* Show history of encrypted messages.

1. A **JavaFX** based application. It will include all features like version 1 and in-addition, an option to ‘crack the code’: a **multi-threaded** action will which crack the Enigma code using **brute-force.**
2. The application will undergo a transition to a **client-server** application. In addition, it will feature a simulated fight between the ‘Allied forces’ and ‘German forces’ using the Enigma machine.

At this point of time, **Version 1** of the project has been completed and **Version 2** is being worked on.

The entire project will be divided to the three projects, making it viable to try each version separately.

Each folder’s original code and executable files include an additional **‘README’** doc file which further explains the usage of that version, how to run it, use it, etc.

# About me

My name is Tomer, and I am a student, finishing my 2nd year of studying Computer Science. The purpose of this project is to:

* Gain knowledge of the Java language and its practical uses.
* Develop my programming and thinking skills.
* Showcasing this project to get necessary feedback to further enhance my skills.