

In the name of GOD

Applied Data & Network Security

Spring 2025

Project 1

Important Notes

- You can use any programming language.
- Copy code from internet and GitHub, GitLab, ... prohibited.
- Project must have a report.
- Explain code in report, add screenshot from running project.
- Report must be submitted in typed form. Submitting a photo of the manuscript is not acceptable.
- For each day of delay in submitting, 20% of the exercise grade will be deducted. After 5 days, no grade will be awarded for the exercise.
- If you have any questions about the exercises, you can ask them in the Telegram group.
- If cheating is observed, action will be taken in accordance with educational rules.
- The output of the exercise must be a pdf file, with name *ANS-Pro#-Name-STID.pdf* like this one *ACN-Pro1-RezaMohammadi-40200123.pdf*. Please name the rest of the items same manner and send it along with pdf file.

Part 1. Symmetric encryption text

Write a program that encrypts an input text with an arbitrary symmetric algorithm.

Part 2. Symmetric file encryption

Add file encryption capability to your application.

Part 3. Asymmetric text encryption

Write a program that encrypts a text with an arbitrary asymmetric algorithm.

Part 4. Asymmetric file encryption

Can you encrypt a file larger than 10 MB with asymmetric algorithms? Explain your answer. Suggest a solution to encrypt large files with the asymmetric algorithms.