



Welcome to

## 6. Software Programming & Memory Corruption

KEA Competence OB2 Software Security 2019

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Slides are available as PDF, kramse@Github

6-sw-programming-and-mem-corruption.tex in the repo security-courses

# Plan for today



## Subjects

- Memory Corruption Errors
- Buffer overflows, stack errors
- C language issues
- Shell code

## Exercises

- Writing and exploiting a small buffer overflow
- Run debugger

# Reading Summary



AoSSA chapters 6: C Language Issues

AoSSA chapters 5: Memory Corruption

## Goals:



# Memory Corruption Errors



# Buffer overflows, stack errors



# C language issues

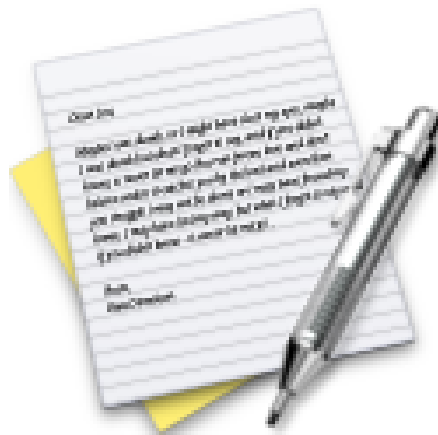


# Shell code





# Exercise

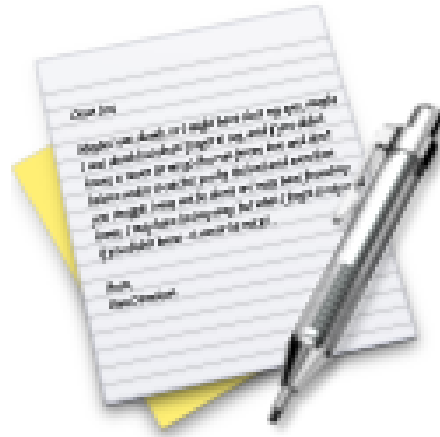


Now lets do the exercise

## Writing and exploiting a small buffer overflow

which is number **14** in the exercise PDF.

# Exercise

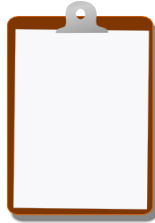


Now lets do the exercise

## Run debugger

which is number **15** in the exercise PDF.

## For Next Time



Think about the subjects from this time, write down questions

Check the plan for chapters to read in the books

Most days have less than 100 pages, but some days may have more!

Visit web sites and download papers if needed

Retry the exercises to get more confident using the tools

Buy the books!