

Exericse 1

Risks, Attacks and Security Goals

Security Requirements

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Outline

1 Security Requirements

- the individual security requirements
- risks arising if they are not fulfilled
- how to implement these requirements using the security mechanisms of today's standard operating systems

given: description of security requirements for a hospital information system

the individual security requirements

- ① integrity of life-critical data
- ② confidentiality of patient data / patient records
- ③ anonymity of patients and their records
- ④ low risks of new technologies

risks arising if they are not fulfilled

- ❶ incorrect treatment of patients and because of that possible harm to patients
- ❷ unauthorized access to patient data
- ❸ serious consequences for medical practice and patients

how to implement these requirements using the security mechanisms of today's standard operating systems

- ① electronic authentication and encryption tools
- ② role-based access control
time limitation of permissions
- ③ proper anonymisation of patient data
- ④ having backup procedures