PV204 Security technologies

Team projects

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CROCS
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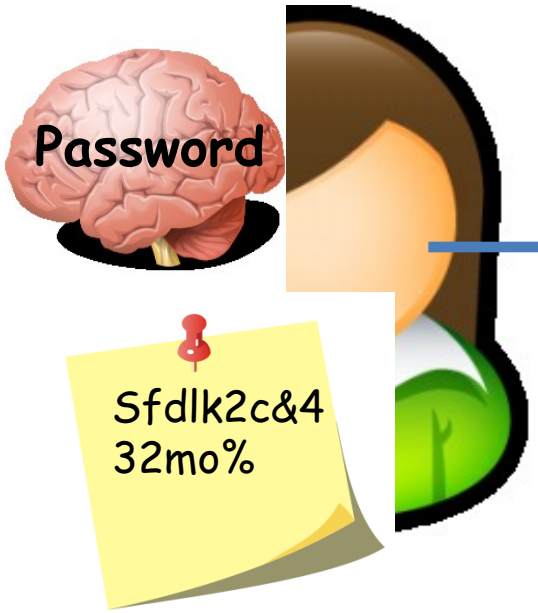
Situation before your project

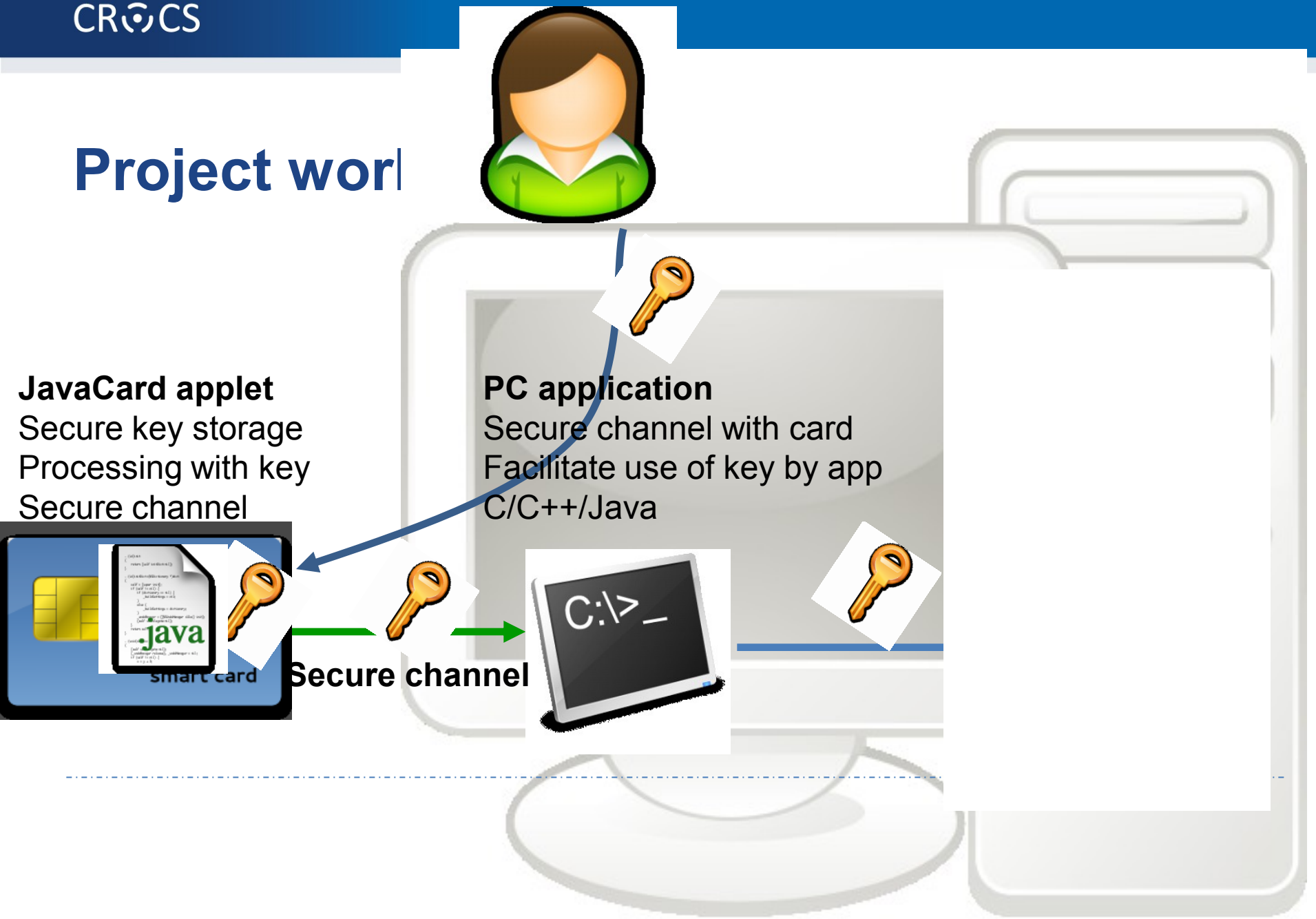
User stores keys
Memory, paper…



Key transmitted to PC app

Open-source application
password manager,
disk encryption,
zip encryption…

Project worl



Project

1. Identify suitable target scenario with need for cryptographic keys (disk encryption, remote authentication, DRM app…)
   - Open-source application
2. Design and implement JavaCard smart card applet
   - Storage and processing of secrets (keys)
   - Authentication and secure channel with PC application
   - Source code and installation scripts provided to other teams (code review)
3. Design and implement PC-based counterpart application
   - Establish secure channel with smart card applet
   - Transmit key from card or transmit data for processing
4. Review implementations of other teams
   - Review design choices made by other team
   - Review source code of other team applet and application (just newly added parts)

Teams

- 3 people per team
  - Assigned today (within group), available in IS
- Teams must use GitHub for cooperation
  - Distribute work load between all members
  - Contribution from all team members must be visible in commits (git commits from the member)
  - Your evaluation will be partially based on your participation
- Start working early, especially with implementation
- Teams may use own existing code from previous assignments (SimpleApplet etc.)

Projects - timeline

1. Identify target scenario, design of applications: 3 points ~~(6.4.2017)~~
   - Report (max. 2 pages A4)
   - Deadline moved to 11.4.
2. Write code (GitHub): 10 points (before 4.5.2017)
   - JavaCard application, PC-based application
   - Design, code + presentation ~~(4.5.2017~~, your seminar group, random team member) – presentation moved to 27.4.
3. Review and attack implementations: 7 points (before 18.5.2017)
   - Up to 4 points assigned by reviewers, up to 3 points by me
   - Review and attack implementations of other teams
   - Report + presentations (18.5.2017, random team member)

- At least 10 points (total) from project are required