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Exercise 3: Requirements specification

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Exercise 3 - Goals

- Hands-on work: start working on detailed requirements
  - break down a selected feature
  - specify detailed requirements
  - discuss requirements with other groups
- Output for projects:
  - concrete progress toward SRS v0.9 (Beta release)
- Feedback on Alpha Release

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Exercise 3 - Agenda

- Introduction (10 min)
  - The purpose of requirements
  - Characteristics of good requirements
- Work in groups (35 min)
  - Specify detailed requirements for a selected feature
  - Send result to teacher for printing during the break
- Requirements workshop (45 min)
  - Printouts organized in four station areas in the classroom
  - Groups rotate to analyze other groups' requirements
    - >> Report positive feedback and improvement potential on sticky notes

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Requirements is about communication

- Who will read your requirements? What do they know?
- Internal:
  - developer to know what to build
  - tester to know what to test
  - sales engineer to know what to sell
  - project manager to overview progress
- External:
  - customers to know what to expect
  - Regulatory Body to enforce standards

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The many faces of the SRS

- SRS is a **contract**
  - what the supplier promises the customer
- SRS is a **fundamental description** of the system
  - a target for the development organization
- SRS is **input to planning**
  - helps a project estimate effort and plan resources
- SRS is a **goal for testing**
  - without an SRS, testers' task less defined
- SRS is a **cornerstone** for high quality software
  - numerous studies show importance of SRS

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Characteristics of good requirements

Correct = If the requirements are not correct, we risk spreading misinformation within project and to customers. Incorrect requirements are useless and potentially dangerous!

Unambiguous = Everyone understands it the same way! Can everyone read, discuss and agree on what it means?

Clear & Concise = Simply and clearly stated. Makes it easier for others (incl. non-team members) to understand.

Verifiable = If a requirement is not verifiable, determining whether it was correctly implemented is a matter of opinion.

Complete = Spec covers the full scope? Exceptions, error handling? Only reference to specific versions of documents.

Consistent = Are there requirements that contradict each other?

Design independant = Describes functionality from user perspective, not how to implement

Traceable = What motivates this req? Indicates if & how much it is needed. Useful when discussing scope &/ reqs changes

Modular = Can be changed without excessive impact.

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