Seminar: Recreational Computer Science
3. How to Prepare a (Seminar) Presentation

Gabi Röger

Universität Basel

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Getting Started
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Structure
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Slides
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Presentation Style
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Most lectures are bad models for seminar presentations.

Getting Started
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Structure
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Discuss in groups of 2-3 and take notes:

What makes the difference between a good and a bad seminar presentation?

(3 minutes)

Outline

Getting Started
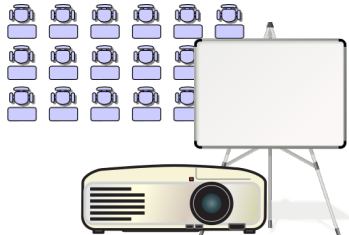○●○○

Structure
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Presentation Style
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Audience

You

Audience

- Who is the audience?
- How large is it?
- What do they already know?
- What should they learn?

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Frame Conditions

- time and duration
- size of room
- presentation equipment
- other presentations
- . . .

Define the Main Message

- 35 minutes is short
- focus on one main message/topic
- motivate and explain it well

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Possible Structure

- title page
- introduction
- outline
- activation of previous knowledge
- new information
- discussion
- conclusion/summary
- questions

Title Page

content

- title
- name
- date/event

presentation

- welcome the audience
- mention title/topic if not already part of your introduction

Introduction

get attention of the audience

- motivating example
- (positive) provocation
- presentation of setting
- . . .

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Outline

- structures the presentation for the audience
- recurring slides with current part highlighted
- alternative: advance organizer
- not always necessary

    Do not give a compact version of your talk!

Activation of Previous Knowledge

- get audience into the topic
- refresh what they probably already know
- connections to other presentations
- interactive component possible but takes time

New Information

main part of the presentation

Discussion

- experimental evaluation
- related work
- relation to previous knowledge

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Conclusion/Summary

- take-home message
- outlook (open questions, advanced topics)

Getting Started
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Getting Started
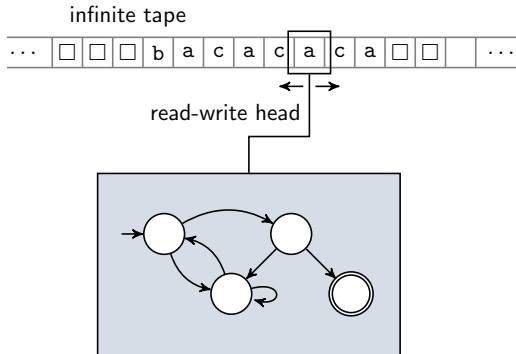0000

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Example: Turing Machines I

Definition (Nondeterministic Turing Machine)

A nondeterministic Turing machine is given by a 7-tuple
$M = \langle Q, \Sigma, \Gamma, \delta, q_0, \square, E \rangle$. Here Q is a finite non-empty set of
states, $\Sigma \neq \emptyset$ is a finite *input alphabet*, $\Gamma \supset \Sigma$ a finite *tape
alphabet*, and $\delta : (Q \setminus E) \times \Gamma \to \mathcal{P}(Q \times \Gamma \times \{L, R, N\})$ is the
transition function. State $q_0 \in Q$ is the *start state*, tape symbol
$\square \in \Gamma \setminus \Sigma$ is the *blank symbol*, and $E \subseteq Q$ is the set of *end states*.

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Example: Turing Machines II

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Example: Turing Machines III

Definition (Nondeterministic Turing Machine)

A nondeterministic Turing machine is given by a 7-tuple
$M = \langle Q, \Sigma, \Gamma, \delta, q_0, \square, E \rangle$ with:

- Q finite non-empty set of states
- $\Sigma \neq \emptyset$ finite input alphabet
- $\Gamma \supset \Sigma$ finite tape alphabet
- $\delta : (Q \setminus E) \times \Gamma \to \mathcal{P}(Q \times \Gamma \times \{L, R, N\})$ transition function
- $q_0 \in Q$ start state
- $\square \in \Gamma \setminus \Sigma$ blank symbol
- $E \subseteq Q$ end states

Pictures and Illustrations

"A picture is worth a thousand words."

- support of text
- additional information
- instead of text
- lightening the mood

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Slide Content

- one statement per slide
- keywords instead of sentences
- use examples, pictures, illustrations
- experimental data: graphs often better than tables
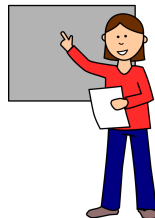- formal definitions only if necessary

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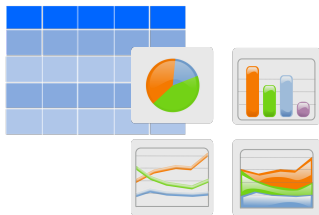
Style

- default font size or larger
- colors for highlighting
- less is more
- careful usage of animations

Style

- speak clearly
- look to the audience (do not talk to the projection)
- do not read out your slides/notes
- stay on time

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Questions

Questions?