

99 bottles of beer (bachelor seminar)

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Sommersemester 2015



99 Bottles of Beer

- collection of 1361 programming languages, all producing (at least) the lyrics of the song “99 bottles of beer”
- collection contains sensible and very weird languages like Malbolge

The Spirit

- we look at 15 programming languages with different, unrelated background (**not** elsewhere discussed)
- we analyse
 - 1 limitation of languages
 - 2 distinguished features of languages
 - 3 the power of esoteric languages
 - 4 languages for dedicated purposes
- every student gets one language (and supervisor), gives a **presentation**, writes a **seminar report**

Limitations of the Language

- 1 brief history and “vision”
- 2 actual use of the language
- 3 differences to similar (well-known) languages like
 - C(++)
 - Haskell
 - Java
 - OCaml
 - Open(C+G)L
 - Prolog, ...

if there is any similarity

Distinguished Features of the Language

- describe the (non-standard) features of the languages in detail
- examples of use, simple introduction
- did these features make sense, where they used?

Esoteric Languages

- expand on “vision”
- did features of these language become standard in the meantime?
LISP was considered esoteric when it was first considered
- how hard is it to program in this language?
Malbolge is nowadays studied as “secure” language

Dedicated Purposes of the Language

- necessity of creation
- what would programmers use, if the language would disappear?
- give (a set of) languages that could be used instead, explain your answer
- has the goal been achieved?
Logo was meant to teach kids how to program, has this had any effect?

Languages No 1–8

- The Opa Language
programming language that joins Client JavaScript and Servercode
- XL Extensible Language
language that implements concept programming
- The Chapel Parallel Programming Language
high performace parallel computing
- Rust
fast systems programming language
- Lava; what's hotter than Java?
- Piet
program code will be in the form of abstract art
- LOLCODE
esoteric programming language
- Neuron; programming neural networks

Languages No 9–15

- QPL
no queries, but language that can be used to write programmes for quantum computer
- vvvv
visual language for multimedia applications
- Om; function application replaced by function composition
- Oz
a multi-paradigm programming language
- Plankalkül
the world's first complete high-level language
- Arithmetic Language version 0
Grace Hopper's first compiler
- The Hume Programming Language
functional language for embedded systems

Grade

the final grade will be based on

- presentation
- seminar report

Seminar Talks

- 25 min, 5 min discussion
- talks have to be given in English

Seminar Reports

- reports must be written in English
- we demand the use of Computational Logic LaTeX class

btw: this is your work, not the work of your supervisor

Assignment of Languages

Bernhard Behr

Martin Karrer

Manfred Moosleitner

Christopher Naschberger

David Oberhollenzer

Sabine Oberleiter

Roman Reinold

Benjamin Vettori

Samuel Rupprechter

Manuel Schischkoff

Yagmur Sentürk

Stefan Spiß

Michael Staudacher

Johannes Tscholl

Benedikt Tuschter

Dates and Times

presentations June 12 & 19

reports July 31, 23:59 WCET