Introduction to Compiler Design

This textbook is intended for an introductory course on Compiler Design, suitable for use in an undergraduate programme in computer science or related fields. Introduction to Compiler Design presents techniques for making realistic, though non-optimizing compilers for simple programming languages using methods that are close to those used in “real” compilers, albeit slightly simplified in places for presentation purposes. All phases required for translating a high-level language to machine language is covered, including lexing, parsing, intermediate-code generation, machine-code generation and register allocation. Interpretation is covered briefly. Aiming to be neutral with respect to implementation languages, algorithms are presented in pseudo-code rather than in any specific programming language, and suggestions for implementation in several different language flavors are in many cases given. The author has taught Compiler Design at the University of Copenhagen for over a decade, and the book is based on material used in the undergraduate Compiler Design course there. Additional material for use with this book, including solutions to selected exercises, is available at http://www.diku.dk/~torbenm/ICD

Features
- It is a fairly concise but not over-simplified treatment of the topic
- The material has been used in teaching for several years, so most errors and ambiguities have been eliminated
- Also, the book does not require any specific programming language for projects etc.

Contents
Lexical Analysis.-Syntax Analysis.-Scopes and Symbol Tables.-Interpretation.-Type Checking.-Intermediate-Code Generation.-Register Allocation.-Functions.-Set Notation and Concepts.

Fields of interest
Programming Languages, Compilers, Interpreters

Target groups
Research

Type of publication
Undergraduate textbook

Due September 2011
2011. XXIII, 208 p. 87 illus. (Undergraduate Topics in Computer Science) Hardcover
- approx. € 79.95 | £59.95

Pervasive Advertising

This book looks at the future of advertising from the perspective of pervasive computing. Pervasive computing encompasses the integration of computers into everyday devices, like the covering of surfaces with interactive displays and networked mobile phones. Advertising is the communication of sponsored messages to inform, convince, and persuade to buy. We believe that our future cities will be digital, giving us instant access to any information we need everywhere, like at bus stops, on the sidewalk, inside the subway and in shopping malls. We will be able to play with and change the appearance of our cities effortlessly, like making flowers grow along a building wall or changing the colour of the street we are in. Like the internet as we know it, this digitalization will be paid for by adverts, which unobtrusively provide us suggestions for nearby restaurants or cafés. If any content annoys us, we will be able to effortlessly say so and change it with simple gestures, and content providers and advertisers will know what we like and be able to act accordingly. This book presents the technological foundations to make this vision a reality.

Features
- First and defining book for the field of Pervasive Advertising
- Includes newest technologies from Pervasive Computing, as they can be applied to advertising
- First book on advertising to bring together authors from Pervasive Computing and Marketing
- Combines presentation of new technologies with experiences from their application

Fields of interest
User Interfaces and Human Computer Interaction; Multimedia Information Systems; Computer Appl. in Social and Behavioral Sciences

Target groups
Research

Type of publication
Reference work

Due September 2011
2011. IV, 355 p. 79 illus. (Human–Computer Interaction Series) Hardcover
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