Discovering, Visualizing, and Controlling Software Structure

R. W. Schwanke, R. Z. Altucher, and M. A. Platoff

Siemens Corporate Research, Inc.
755 College Rd. East
Princeton, NJ 08540

1. Introduction

Although many good principles, methods, and notations for large system design have been developed in the last two decades, they have seen little application to software system maintenance. The reasons seem to be the large cost and the diminishing value of writing specifications after the code already exists. This paper describes research that is attempting to bridge the gap between software design and software maintenance. The MAINTAINER'S ASSISTANT project at Siemens Research is researching ways to make the software maintainer more productive, in part by helping him contend with the enormous amounts of information in the project database. A sub-project, ARCH[1], is developing a new approach to controlling the structure of a large software system during maintenance. The approach assumes that a large body of code may already exist before the structure is formally specified. The ARCH methodology includes

- a practical notation for specifying software structure,
- a graph editor to help the architect visualize and construct the specification,
- a tool that extracts the actual structure of a system and compares it to the specification, and
- an automatic classification tool that helps an architect analyze existing code to discover an appropriate structure specification.

This paper describes the specification method used in ARCH, the *condensation* method that aids visualization, and the classification tool, which uses *conceptual clustering* to help the architect discover the structure of

the system. The clustering is based on detailed cross-reference information, which we hypothesize provides useful "light semantic" profiles of the parts of a system. The paper includes preliminary results from some experiments in analyzing a real system, and describes the full-scale experiment we plan to carry out next.

2. How ARCH Will Be Used

The focal point of ARCH is an architecture specification that documents the intended structural design of a large program, and controls its evolution. We use the term "architecture" to refer to structural aspects of the program, and not its function.[2] The structure of a program is the set of connections between software units. The architecture is a set of *allowed* connections. ARCH controls the structure by checking the actual connections to see if they are allowed. This checking is incorporated in the system building process, so that errors are reported to the programmer as early as possible.

Typically, the structure of a system contains far too many connections for the architecture to list each of them individually. Instead, the architecture specifies a subsystem tree that places software units in groups, and those groups in larger groups, and so on. Then, the set of allowed connections can include connections between groups, as well as individual units.

Keeping the specification separate from the code distinguishes "what is allowed" from "what is". The architecture permits a large set of possible structures that are equally acceptable from the point of view of the overall design. The import/export clauses in the code of, say, an Ada program, describe only the current structure of the actual code.

This distinction is very useful for coordinating teams of programmers. An individual programmer is expected to take advantage of as much existing code as possible, by importing it into his modules and invoking its procedures, types, and so on. Therefore, he is authorized to modify his import/export clauses to fit the needs of his code.

---

[2] Reasonable persons might disagree with our choice of terms. Nonetheless, the need to control structure is apparent.

Fifth International Workshop On Software Specification And Design

International Workshop on Software Specification and Design

Fifth International Workshop On Software Specification And Design:

    Fifth International Workshop on Software Specification and Design International Workshop on Software Specification and Design,1989   **Proceedings** International Workshop on Software Specification and Design (5, 1989, Pittsburgh, Pa.),1989   **Proceedings of the Fifth International Workshop on Software Specification and Design** ,1999   Fifth International Workshop on Software Specification and Design ,1989   Proceedings of the Fifth International Workshop on Hardware/Software Co-Design (Codes/CASHE '97) ,1997 Contains papers from the March 1997 workshop in sections on scheduling and allocation target architectures and debugging optimization communication issues synthesis of run time environments modeling and simulation acceleration and trading off hardware and software Topics include interface optimization during hardware software partitioning software architecture synthesis for retargetable real time embedded systems software acceleration using coprocessors and an evolutionary approach to system level synthesis No index Annotation copyrighted by Book News Inc Portland OR   Business Modeling and Software Design Boris Shishkov,2012-04-23 This book contains the extended and revised versions of eight of the ten full papers out of 58 submissions presented at the First International Symposium on Business Modeling and Software Design BMSD 2011 held in Sofia Bulgaria The theme of BMSD 2011 was Business Models and Advanced Software Systems and the related scientific areas of interest were business models and requirements business models and services business models and software and information systems architecture   Proceedings ,1989   **The Fifth International Workshop on Rapid System Prototyping** Nick Kanopoulos,1994 Proceedings of the June 1994 workshop presenting 25 papers on models for system simulation emulation in a hierarchical sense software to hardware mapping software prototyping and validation prototyping environments of hardware simulators and experiences from specific system prototyping projects Lacks an index Annotation copyright by Book News Inc Portland OR   Proceedings ,1989   VDM '91. Formal Software Development Methods. 4th International Symposium of VDM Europe, Noordwijkerhout, The Netherlands, October 21-25, 1991. Proceedings Søren Prehn,W. J. Toetenel,1991 The proceedings of the fourth Vienna Development Method Symposium VDM 91 are published here in two volumes Previous VDM symposia were held in 1987 LNCS 252 1988 LNCS 328 and 1990 LNCS 428 The VDM symposia have been organized by the VDM Europe formed in 1985 as an advisory board sponsored by the Commission of the European Communities The VDM Europe working group consisted of reasearchers software engineers and programmers all interested in prommoting the industrial usage of formal methods for software development The fourth VDM symposium presented not only VDM but also a large number of other methods for formal software development Volume 1 contains the conference contributions It has four parts contributions of invited speakers papers project reports and tools demonstration abstracts The emphasis is on methods and calculi for development verification and verification tools support experiences from doing developments and the associated theoretical problems Volume2 contains four introductory tutorials on LARCH

Refinement Calculus VDM and RAISE and four advanced tutorials on ABEL PROSPECTRA The B Method and The Stack They present a comprehensive account of the state of the art PUBLISHER S WEBSITE   **Object-oriented Technology For Database And Software Systems** V S Alagar,Rokia Missaoui,1995-09-28 Object orientation has become a must know subject for managers researchers and software practitioners interested in the design evolution reuse and management of efficient software components The book contains technical papers reflecting both theoretical and practical contributions from researchers in the field of object oriented OO databases and software engineering systems The book identifies actual and potential areas of integration of OO and database technologies current and future research directions in software methodologies and reflections about the OO paradigm In providing current research and relevant information about this promising and rapidly growing field of object oriented databases and software engineering systems this book is invaluable to research scientists practitioners and graduate students working in the areas of databases and software engineering

    Perspectives on Software Requirements Julio Cesar Sampaio do Prado Leite,Jorge Horacio Doorn,2012-12-06 Perspectives On Software Requirements presents perspectives on several current approaches to software requirements Each chapter addresses a specific problem where the authors summarize their experiences and results to produce well fit and traceable requirements Chapters highlight familiar issues with recent results and experiences which are accompanied by chapters describing well tuned new methods for specific domains   **Proceedings Fifth International Workshop on Software Specification and Design** ,1989   **Non-Functional Requirements in Software Engineering** Lawrence Chung,Brian A. Nixon,Eric Yu,John Mylopoulos,2012-12-06 Non Functional Requirements in Software Engineering presents a systematic and pragmatic approach to building quality into software systems Systems must exhibit software quality attributes such as accuracy performance security and modifiability However such non functional requirements NFRs are difficult to address in many projects even though there are many techniques to meet functional requirements in order to provide desired functionality This is particularly true since the NFRs for each system typically interact with each other have a broad impact on the system and may be subjective To enable developers to systematically deal with a system s diverse NFRs this book presents the NFR Framework Structured graphical facilities are offered for stating NFRs and managing them by refining and inter relating NFRs justifying decisions and determining their impact Since NFRs might not be absolutely achieved they may simply be satisfied sufficiently satisficed To reflect this NFRs are represented as softgoals whose interdependencies such as tradeoffs and synergy are captured in graphs The impact of decisions is qualitatively propagated through the graph to determine how well a chosen target system satisfices its NFRs Throughout development developers direct the process using their expertise while being aided by catalogues of knowledge about NFRs development techniques and tradeoffs which can all be explored reused and customized Non Functional Requirements in Software Engineering demonstrates the applicability of the NFR Framework to a variety of NFRs domains system characteristics and application areas This will help readers

apply the Framework to NFRs and domains of particular interest to them Detailed treatments of particular NFRs accuracy security and performance requirements along with treatments of NFRs for information systems are presented as specializations of the NFRFramework Case studies of NFRs for a variety of information systems include credit card and administrative systems The use of the Framework for particular application areas is illustrated for software architecture as well as enterprise modelling Feedback from domain experts in industry and government provides an initial evaluation of the Framework and some case studies Drawing on research results from several theses and refereed papers this book s presentation terminology and graphical notation have been integrated and illustrated with many figures Non Functional Requirements in Software Engineering is an excellent resource for software engineering practitioners researchers and students **Software Engineering with Computational Intelligence** Jonathan Lee,2013-11-11 It is not an exaggeration to view Professor Lee s book Software Engineer ing with Computational Intelligence or SECI for short as a pioneering contribution to software engineering Breaking with the tradition of treat ing uncertainty imprecision fuzziness and vagueness as issues of peripheral importance SECI moves them much closer to the center of the stage It is ob vious though still not widely accepted that this is where these issues should be since the real world is much too complex and much too ill defined to lend itself to categorical analysis in the Cartesian spirit As its title suggests SECI employs the machineries of computational intel ligence CI and more or less equivalently soft computing SC to deal with the foundations and principal issues in software engineering Basically CI and SC are consortia of methodologies which collectively provide a body of con cepts and techniques for conception design construction and utilization of intelligent systems The principal constituents of CI and SC are fuzzy logic neurocomputing evolutionary computing probabilistic computing chaotic computing and machine learning The leitmotif of CI and SC is that in general better performance can be achieved by employing the constituent methodologies of CI and SC in combination rat her than in a stand alone mode In what follows I will take the liberty of focusing my attention on fuzzy logic and fuzzy set theory and on their roles in software engineering But first a couple of points of semantics which are in need of clarification **User-Centred Requirements Engineering** Alistair Sutcliffe,2012-12-06 If you have picked up this book and are browsing the Preface you may well be asking yourselfWhat makes this book different from the large number I can find on amazon com Well the answer is a blend of the academic and the practical and views of the subject you won t get from anybody else how psychology and linguistics influence the field of requirements engineering RE The title might seem to be a bit of a conundrum after all surely requirements come from people so all requirements should be user centred Sadly that is not always so many system disasters have been caused simply because requirements engineering was not user centred or worse still was not practised at all So this book is about putting the people back into com puting although not simply from the HCI human computer interaction sense instead the focus is on how to understand what people want and then build appropriate computer systems Handbook of Software Engineering &

Knowledge Engineering Shi Kuo Chang,2002 This is the first handbook to cover comprehensively both software engineering and knowledge engineering two important fields that have become interwoven in recent years Over 60 international experts have contributed to the book Each chapter has been written in such a way that a practitioner of software engineering and knowledge engineering can easily understand and obtain useful information Each chapter covers one topic and can be read independently of other chapters providing both a general survey of the topic and an in depth exposition of the state of the art Practitioners will find this handbook useful when looking for solutions to practical problems Researchers can use it for quick access to the background current trends and most important references regarding a certain topic The handbook consists of two volumes Volume One covers the basic principles and applications of software engineering and knowledge engineering Volume Two will cover the basic principles and applications of visual and multimedia software engineering knowledge engineering data mining for software knowledge and emerging topics in software engineering and knowledge engineering

Proceedings, Fifth International Software Metrics Symposium, Metrics 1998 ,1998 Partial Contents Architectural Metrics Program Understanding Program Analysis Software Process Improvement Error Models Object Oriented Measures Program Management Measures Formal Models Testing Measures   Innovations in Computing Sciences and Software Engineering Tarek Sobh,Khaled Elleithy,2010-06-26 Innovations in Computing Sciences and Software Engineering includes a set of rigorously reviewed world class manuscripts addressing and detailing state of the art research projects in the areas of Computer Science Software Engineering Computer Engineering and Systems Engineering and Sciences Topics Covered Image and Pattern Recognition Compression Image processing Signal Processing Architectures Signal Processing for Communication Signal Processing Implementation Speech Compression and Video Coding Architectures Languages and Systems Algorithms Databases Embedded Systems and Applications File Systems and I O Geographical Information Systems Kernel and OS Structures Knowledge Based Systems Modeling and Simulation Object Based Software Engineering Programming Languages and Programming Models and tools Parallel Processing Distributed Scheduling Multiprocessing Real time Systems Simulation Modeling and Development and Web Applications Signal and Image Processing Content Based Video Retrieval Character Recognition Incremental Learning for Speech Recognition Signal Processing Theory and Methods and Vision based Monitoring Systems Software and Systems Activity Based Software Estimation Algorithms Genetic Algorithms Information Systems Security Programming Languages Software Protection Techniques Software Protection Techniques and User Interfaces Distributed Processing Asynchronous Message Passing System Heterogeneous Software Environments Mobile Ad Hoc Networks Resource Allocation and Sensor Networks New trends in computing Computers for People of Special Needs Fuzzy Inference Human Computer Interaction Incremental Learning Internet based Computing Models Machine Intelligence Natural Language   Formal Methods for Distributed Processing Howard Bowman,John Derrick,2001-10-22 Originally published in 2002 this book presents techniques in the application of formal methods to object

based distributed systems A major theme of the book is how to formally handle the requirements arising from OO distributed systems such as dynamic reconfiguration encapsulation subtyping inheritance and real time aspects These may be supported either by enhancing existing notations such as UML LOTOS SDL and Z or by defining fresh notations such as Actors Pi calculus and Ambients The major specification notations and modelling techniques are introduced and compared by leading researchers The book also includes a description of approaches to the specification of non functional requirements and a discussion of security issues Researchers and practitioners in software design object oriented computing distributed systems and telecommunications systems will gain an appreciation of the relationships between the major areas of concerns and learn how the use of object oriented based formal methods provides workable solutions

Fuel your quest for knowledge with Learn from is thought-provoking masterpiece, Dive into the World of **Fifth International Workshop On Software Specification And Design** . This educational ebook, conveniently sized in PDF (*), is a gateway to personal growth and intellectual stimulation. Immerse yourself in the enriching content curated to cater to every eager mind. Download now and embark on a learning journey that promises to expand your horizons. .

http://www.pet-memorial-markers.com/data/book-search/HomePages/Gorbachevs%20New%20Thinking%20Prospects%20For%20Joint%20Ventures.pdf

Table of Contents Fifth International Workshop On Software Specification And Design

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

Fifth International Workshop On Software Specification And Design Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Fifth International Workshop On Software Specification And Design free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Fifth International Workshop On Software Specification And Design free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Fifth International Workshop On Software Specification And Design free PDF files is convenient, its important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify

the authenticity of the source before downloading Fifth International Workshop On Software Specification And Design. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be cautious and verify the legality of the source before downloading Fifth International Workshop On Software Specification And Design any PDF files. With these platforms, the world of PDF downloads is just a click away.

FAQs About Fifth International Workshop On Software Specification And Design Books

What is a Fifth International Workshop On Software Specification And Design PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Fifth International Workshop On Software Specification And Design PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Fifth International Workshop On Software Specification And Design PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Fifth International Workshop On Software Specification And Design PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Fifth International Workshop On Software Specification And Design PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or

various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Fifth International Workshop On Software Specification And Design :

gorbachevs new thinking prospects for joint ventures
good housekeeping best recipes
good for me
good-bye midnight wanderer
good reasoning matters a constructive approach to critical thinking
goodbye buffalo sky
good life san francisco restaurant guide good life guides series
goose on your grave
good things grow things good
good housekeeping all colour cookbook good housekeeping cookery club s.
good food good mood a nutritional guide to an allergyfree happier healthier life
good laboratory practice the why and the how
gotthold ephraim lebing nathan der weise universalbibliothek nr 811818a erlaauterungen und dokumente
good soldier svejk and his fortunes in the world war
good-bye dollie a theatrical autobiography slightly edited

Fifth International Workshop On Software Specification And Design :

Essentials of Strength Training and Conditioning, 4ed Developed by the National Strength and Conditioning Association (NSCA) and now in its fourth edition, Essentials of Strength Training and Conditioning is the ... Essentials of Strength Training and Conditioning Developed by the National Strength and Conditioning Association (NSCA) and now in its fourth edition, Essentials of Strength Training and Conditioning is ... Essentials of Strength Training and Conditioning 4th ... Developed by the National Strength and Conditioning Association (NSCA) and now in its fourth edition, Essentials of Strength Training and Conditioning is ... NSCA Store The NSCA Store offers the gear you need for your career as a fitness

professional. Purchase apparel, educational books and resources, official NSCA ... NSCA -National Strength & Conditioning Association Top NSCA -National Strength & Conditioning Association titles ; Essentials of Strength Training and Conditioning ... NSCA NSCA's Certified Strength and Conditioning Specialist (CSCS) 4th Edition Online Study/CE Course Without Book.. (6). $199.00 USD. Unit price /. BASICS OF STRENGTH AND CONDITIONING MANUAL by WA Sands · Cited by 53 — to the "Essentials of Strength Training and Conditioning" (3rd ed.) textbook (1). Through various reactions within the body, an intermediate molecule called ... Essentials of Strength Training and Conditioning - NSCA Developed by the National Strength and Conditioning Association (NSCA) and now in its fourth edition, Essentials of Strength Training and Conditioning is ... national strength conditioning association Exercise Technique Manual for Resistance Training-2nd Edition by NSCA -National Strength & Conditioning Association and a great selection of related books, ... Ayurveda & Aromatherapy: The Earth... by Dr. Light Miller This book is a collection of twenty-five years of healing experience using aromatherapy and Ayurveda. The book presents both sciences in a format for Westerners ... Ayurveda and aromatherapy: The earth... by Dr. Light Miller This book is a collection of healing experience using aromatherapy and Ayurveda. The book presents both sciences in format for Westerns. Ayurveda & Aromatherapy: The Earth Essential Guide to ... Ayurveda & Aromatherapy: The Earth Essential Guide to Ancient Wisdom and Modern Healing - Softcover ; Ayurveda & Aromatherapy Format: Paperback. Miller, Bryan. Ayurveda & Aromatherapy: The Earth Essential Guide ... This book integrates the ancient healing science of Ayurveda with the modern development of Aromatherapy. The authors have long term experience in clinical ... Ayurveda & Aromatherapy: The Earth Essential Guide ... Ayurveda & Aromatherapy This book integrates the ancient healing science of Ayurveda with the modern development of Aromatherapy. The authors have long term ... Ayurveda Aromatherapy. The Earth Essential Guide to ... Dr. Light Miller & Dr. Bryan Miller ... Synopsis: This book is a collection of twenty-five years of healing experience using aromatherapy and Ayurveda. "About ... Ayurveda & Aromatherapy (The EARTH Essentials Guide ... Helps you diagnose your metabolic type and apply healing modalities. This book title, Ayurveda & Aromatherapy (The EARTH Essentials Guide to Ancient Wisdom ... Ayurveda & Aromatherapy: The Earth Essential Guide to ... Ayurveda & Aromatherapy: The Earth Essential Guide to Ancient Wisdom and Modern ; Quantity. 1 available ; Item Number. 186148998519 ; ISBN. 9780914955207. Ayurveda and aromatherapy: The earth Essential Guide to ... Theis book is a collection of healing experience using aromatherapy and Ayurveda. The book presents both sciences in a format for westerners, It includes a self ... Ayurveda and Aromatherapy: The Earth Essential Guide to ... This book is a collection of twenty-five years of healing experience using aromatherapy and Ayurveda. It includes a self-diagnosis questionnaire to ... Bikini Body Guide: Exercise & Training Plan - L'instant Flo From the food you eat, the beverages you drink, the cardio you do, your resistance training, how much sleep you get, how much work/ study you do and much more! Free High Intensity with Kayla (formerly BBG) Workout Dec 20, 2017 — Try a FREE High Intensity with Kayla workout! Work up a sweat &

challenge yourself with this circuit workout inspired by my program. FREE 8 week bikini body guide by Kayla Itsines - Pinterest Dec 24, 2017 — FREE 8 week bikini body guide by Kayla ItsinesThis 8 week plan cost me £50 so make the most of this while it lasts!! Kayla Itsines' 28-day Home Workout Plan - No Kit Needed Jun 2, 2020 — Kayla Itsines workout: This 28-day plan is for all fitness levels, to help you tone-up and get fit without the gym. FREE 8 week bikini body guide by Kayla Itsines - Pinterest Oct 18, 2017 — FREE 8 week bikini body guide by Kayla ItsinesThis 8 week plan cost me £50 so make the most of this while it lasts!! The 28-Day Bikini Body Workout Plan - Muscle & Fitness Challenge yourself to get your best-ever bikini body this year! Our four-week program is designed to blast fat, boost metabolism and build muscle, ... You can now do Kayla Itsines' Bikini Body Guide fitness ... Mar 31, 2020 — Fitness icon Kayla Itsines is offering her Bikini Body Guide fitness program free; New members have until April 7th to sign up to Sweat app ... 10 Ways to Get a Bikini Body Fast - wikiHow Start sculpting your bikini body with an easy, 10-minute circuit. After a quick warm-up, start your workout with two 15-24 rep sets of squats. Then, transition ... The Ultimate Beginner's Workout for a Bikini Body Whether you want to get toned, slim thick or bootylicious, this free guide contains all the essentials for women to improve their body, fitness and health.