

Problem Solving Abstraction And Design Using C 6th Edition

This is likewise one of the factors by obtaining the soft documents of this **problem solving abstraction and design using c 6th edition** by online. You might not require more times to spend to go to the book launch as skillfully as search for them. In some cases, you likewise realize not discover the proclamation problem solving abstraction and design using c 6th edition that you are looking for. It will completely squander the time.

However below, taking into account you visit this web page, it will be hence extremely simple to get as competently as download lead problem solving abstraction and design using c 6th edition

It will not take on many get older as we notify before. You can complete it even if do something something else at house and even in your workplace. correspondingly easy! So, are you question? Just exercise just what we pay for under as skillfully as review **problem solving abstraction and design using c 6th edition** what you like to read!

Problem Solving, Abstraction, Design Using C++ - Frank L. Friedman
2000

This revision of the classic Problem Solving, Abstraction, and Design Using C++ presents, and then reinforces, the basic principles of software engineering and object-oriented programming while introducing the C++ programming language. One of the hallmarks of this book is the focus on program design. Professors Frank Friedman and Elliot Koffman present a Software Development Method in Chapter 1 that is revisited in the Case Studies throughout the book. This book carefully presents object-oriented programming by balancing it with procedural programming so the reader does not overlook the fundamentals of algorithm organization and design. Object-oriented concepts are presented via an overview in Chapter 1 and then demonstrated with the use of the standard string and iostream classes and a user-defined money class throughout the early chapters. Chapter 10 shows how to write your own classes and chapter 11 shows how to write template classes. The presentation of classes is flexible and writing classes can be covered earlier if desired.

Data Structures Using C++ - D. S. Malik 2009-07-31

Now in its second edition, D.S. Malik brings his proven approach to C++ programming to the CS2 course. Clearly written with the student in mind, this text focuses on Data Structures and includes advanced topics in C++ such as Linked Lists and the Standard Template Library (STL). The text features abundant visual diagrams, examples, and extended Programming Examples, all of which serve to illuminate difficult concepts. Complete programming code and clear display of syntax, explanation, and example are used throughout the text, and each chapter concludes with a robust exercise set. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Data Abstraction and Problem Solving with C++ - Frank M. Carrano
1998

"Focusing on data abstraction and data structures, the second edition of this very successful book continues to emphasize the needs of both the instructor and the student. The book illustrates the role of classes and abstract data types (ADTs) in the problem-solving process as the

foundation for an object-oriented approach. Throughout the next, the distinction between specification and implementation is continually stressed. The text covers major applications of ADTs, such as searching a flight map and performing an event-driven simulation. It also offers early, extensive coverage of recursion and uses this technique in many examples and exercises. Overall, the lucid writing style, widespread use of examples, and flexible coverage of material have helped make this a leading book in the field." --Book Jacket.

Project Impact - Disseminating Innovation in Undergraduate Education - Ann McNeal 1998-02

Contains abstracts of innovative projects designed to improve undergraduate education in science, mathematics, engineering, and technology. Descriptions are organized by discipline and include projects in: astronomy, biology, chemistry, computer science, engineering, geological sciences, mathematics, physics, and social sciences, as well as a selection of interdisciplinary projects. Each abstract includes a description of the project, published and other instructional materials, additional products of the project, and information on the principal investigator and participating institutions.

Problem Solving with Java - Elliot B. Koffman 2002

"Problem Solving with Java"(TM), "Second Edition" provides an accessible introduction to programming that carefully balances the problem-solving skills all beginning programmers need to develop with the essential constructs of the Java programming language. This edition includes coverage of: Problem-Solving: Strong problem-solving skills are emphasized through 20 Case Studies, 10 of which are new to this edition. Each emphasizes the classic Koffman 5-step approach: problem specification, analysis, design, implementation, and testing. Object-Oriented Design: Principles of object-oriented design are used throughout, building up to an in-depth discussion of object-oriented design midway through the book. Inheritance, interfaces, and abstract classes are introduced by examining several case studies that use these features. Applications and Applets: Coverage of both applications and applets is provided throughout, including several examples of each.

Graphical User Interface: The material describes how to build GUIs using swing components. It also shows how to use class JFrame to write applications that have GUIs. Input and Output: Most programs in the book use standard Java I/O methods. An optional package using class methods for input, based on class, JOptionPane, to simplify data entry with dialog windows can also be used. Streams and Files: A new chapter covers streams and files, including coverage of streams of characters and streams of binary files, as well as demonstrations of how to read and write files of objects.

Data Abstraction and Structures Using C++ - Mark R. Headington 1994

Student Value Edition for Problem Solving with C++ Plus MyProgrammingLab with Pearson Etext -- Access Card Package - Walter Savitch 2011-06

This package contains Problem Solving with C++, 8e, Student Value Edition, an access card for MyProgrammingLab, and a Pearson eText Student Access Code Card for Problem Solving with C++, 8/e. Problem Solving with C++ continues to be the most widely used textbook by students and instructors in the introduction to programming and C++ language course. Through each edition, hundreds and thousands of students have valued Walt Savitch's approach to programming, which emphasizes active reading through the use of well-placed examples and self-test examples. Created for the beginner, this book focuses on cultivating strong problem-solving and programming techniques while introducing students to the C++ programming language.

MyProgrammingLab is a database of programming exercises correlated to specific Pearson CS1/Intro to Programming textbooks. The exercises are short, focused on a particular programming topic, and are assignable and automatically evaluated. MyProgrammingLab provides immediate, personalized feedback which helps students master the syntax, semantics and basic usage of the programming language, freeing instructors to focus on problem-solving strategies, design and analysis, abstraction, algorithms, and style. Learn more at

www.myprogramminglab.com.

Algorithms, Data Structures, and Problem Solving with C++ - Mark Allen Weiss 1996

Experienced author and teacher Mark Allen Weiss now brings his expertise to the CS2 course with *Algorithms, Data Structures, and Problem Solving with C++*, which introduces both data structures and algorithm design from the viewpoint of abstract thinking and problem solving. The author chooses C++ as the language of implementation, but the emphasis of the book itself remains on uniformly accepted CS2 topics such as pointers, data structures, algorithm analysis, and increasingly complex programming projects. *Algorithms, Data Structures, and Problem Solving with C++* is the first CS2 textbook that clearly separates the interface and implementation of data structures. The interface and running time of data structures are presented first, and students have the opportunity to use the data structures in a host of practical examples before being introduced to the implementations. This unique approach enhances the ability of students to think abstractly. Features Retains an emphasis on data structures and algorithm design while using C++ as the language of implementation. Reinforces abstraction by discussing interface and implementations of data structures in different parts of the book. Incorporates case studies such as expression evaluation, cross-reference generation, and shortest path calculations. Provides a complete discussion of time complexity and Big-Oh notation early in the text. Gives the instructor flexibility in choosing an appropriate balance between practice, theory, and level of C++ detail. Contains optional advanced material in Part V. Covers classes, templates, and inheritance as fundamental concepts in sophisticated C++ programs. Contains fully functional code that has been tested on g++2.6.2, Sun 3.0.1, and Borland 4.5 compilers. Code is integrated into the book and also available by ftp. Includes end-of-chapter glossaries, summaries of common errors, and a variety of exercises.

0805316663B04062001

Programming and Problem Solving with C++ - Nell B. Dale
1996-01-01

Data Structures and Algorithms in C++ - Michael T. Goodrich
2011-02-22

An updated, innovative approach to data structures and algorithms. Written by an author team of experts in their fields, this authoritative guide demystifies even the most difficult mathematical concepts so that you can gain a clear understanding of data structures and algorithms in C++. The unparalleled author team incorporates the object-oriented design paradigm using C++ as the implementation language, while also providing intuition and analysis of fundamental algorithms. Offers a unique multimedia format for learning the fundamentals of data structures and algorithms. Allows you to visualize key analytic concepts, learn about the most recent insights in the field, and do data structure design. Provides clear approaches for developing programs. Features a clear, easy-to-understand writing style that breaks down even the most difficult mathematical concepts. Building on the success of the first edition, this new version offers you an innovative approach to fundamental data structures and algorithms.

Programming, Problem Solving and Abstraction with C - Alistair Moffat 2013

Professor Moffat has been a member of the academic staff at the University of Melbourne since 1987. This book has evolved out of his 20 years' teaching experience with first year students. The readable style is punctuated by more than 100 working programs and each chapter includes detailed case study, key points and exercises.

Data Structures and Problem Solving Using Java - Mark Allen Weiss
2002

Uses Java to teach data structures and algorithms from the perspective of abstract thinking and problem solving.

[Programming and Problem Solving with C++](#) - Nell Dale 2022-07-15

"Programming and Problem Solving with C++ is appropriate for the introductory C++ programming course at the undergraduate level. Due to its coverage, it can be used in a one or two semester course.

Competitive advantages of this title include: The reputation of the authors. Appropriate and thorough coverage of C++ topics for the

beginner programmer Clear examples and exercises, with hands-on examples and case studies"--

Programming and Problem Solving with C++: Brief Edition - Nell Dale 2010-10-22

Based off the highly successful Programming and Problem Solving with C++ which Dale is famous for, comes the new Brief Edition, perfect for the one-term course. The text was motivated by the need for a text that covered only what instructors and students are able to move through in a single semester without sacrificing the breadth and detail necessary for the introductory programmer. The authors excite and engage students in the learning process with their accessible writing style, rich pedagogy, and relevant examples. This Brief Edition introduces the new Software Maintenance Case Studies element that teaches students how to read code in order to debug, alter, or enhance existing class or code segments.

Programming and Problem Solving with C++ - Nell B. Dale 2005

This book is a reference which addresses the many settings that geriatric care managers find themselves in, such as hospitals, long-term care facilities, and assisted living and rehabilitation facilities. It also includes case studies and sample forms.

Structured and Object-oriented Problem Solving Using C++ Andrew C. Staugaard 2002

Appropriate for Introductory Computer Science (CS1) courses using C++ and Introductory C++ programming courses found in Computer Science, Engineering, CIS, MIS, and Business Departments. This accessible text emphasizes problem-solving techniques using the C++ language, with coverage that develops strong problem-solving skills using problem abstraction and stepwise refinement through the "Programmer's Algorithm." Staugaard first emphasizes the structured (procedural) paradigm, then gradually advances to the object-oriented paradigm using object-oriented programming "seed topics." This approach prepares students for in-depth coverage of classes and objects presented later in the text, while building essential structured programming concepts.

Data Abstraction & Problem Solving with C++ - Frank M. Carrano 2007

The classic, best-selling Data Abstraction and Problem Solving with C++: Walls and Mirrors book provides a firm foundation in data abstraction that emphasizes the distinction between specifications and implementation as the basis for an object-oriented approach. This new edition offers the latest C++ features and an introduction to using Doxygen—a documentation generator for C++, enhanced coverage of Software Engineering concepts and additional UML diagrams. Frank's Making it Real blog <http://frank-m-carrano.com/blog/> extends his textbooks and lectures to a lively discussion with instructors and students about teaching and learning computer science. Follow Frank on Twitter: http://twitter.com/Frank_M_Carrano Find him on Facebook: <https://www.facebook.com/makingitreal>

Problem Solving with Algorithms and Data Structures Using Python Bradley N. Miller 2011

THIS TEXTBOOK is about computer science. It is also about Python. However, there is much more. The study of algorithms and data structures is central to understanding what computer science is all about. Learning computer science is not unlike learning any other type of difficult subject matter. The only way to be successful is through deliberate and incremental exposure to the fundamental ideas. A beginning computer scientist needs practice so that there is a thorough understanding before continuing on to the more complex parts of the curriculum. In addition, a beginner needs to be given the opportunity to be successful and gain confidence. This textbook is designed to serve as a text for a first course on data structures and algorithms, typically taught as the second course in the computer science curriculum. Even though the second course is considered more advanced than the first course, this book assumes you are beginners at this level. You may still be struggling with some of the basic ideas and skills from a first computer science course and yet be ready to further explore the discipline and continue to practice problem solving. We cover abstract data types and data structures, writing algorithms, and solving problems. We look at a number of data structures and solve classic problems that arise. The tools and techniques that you learn here will be applied over

and over as you continue your study of computer science.

Data Structures and Algorithms in Java - Michael T. Goodrich 2014-01-28

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, `net.datastructures`. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

Objects, Abstraction, Data Structures and Design - Elliot B. Koffman 2005-10-20

"It is a practical book with emphasis on real problems the programmers encounter daily." --Dr. Tim H. Lin, California State Polytechnic University, Pomona "My overall impressions of this book are excellent. This book emphasizes the three areas I want: advanced C++, data structures and the STL and is much stronger in these areas than other competing books." --Al Verbanec, Pennsylvania State University Think, Then Code When it comes to writing code, preparation is crucial to success. Before you can begin writing successful code, you need to first work through your options and analyze the expected performance of your design. That's why Elliot Koffman and Paul Wolfgang's *Objects, Abstraction, Data Structures, and Design: Using C++* encourages you to Think, Then Code, to help you make good decisions in those critical first steps in the software design process. The text helps you thoroughly understand basic data structures and algorithms, as well as essential design skills and principles. Approximately 20 case studies show you how to apply those skills and principles to real-world problems. Along the way, you'll gain an understanding of why different data structures are needed, the applications they are suited for, and the advantages and disadvantages of

their possible implementations. Key Features * Object-oriented approach. * Data structures are presented in the context of software design principles. * 20 case studies reinforce good programming practice. * Problem-solving methodology used throughout... "Think, then code!" * Emphasis on the C++ Standard Library. * Effective pedagogy.

Data Abstraction & Problem Solving with Java - Janet J. Prichard 2010-10

Rev. ed. of: *Data abstraction and problem solving with Java* / Frank M. Carrano, Janet J. Prichard. 2007.

Engineering Problem Solving with C++ - Delores Maria Etter 2008 This is a clear, concise introduction to problem solving and the C++ programming language. The authors' proven five-step problem solving methodology is presented and then incorporated in every chapter of the text. Uses outstanding engineering and scientific applications throughout; all applications are centered around the theme of engineering challenges in the 21st century. Includes major revisions to bring the material up to date, such as new coverage of file streams, including a discussion of the stream class hierarchy and a discussion of stream state flags; numerous new tables and programming examples aid in error checking. A useful reference for engineers at national labs who want to make the transition from C to C++.

Java for Students - Doug Bell 2001

Aware that many students need a careful introduction to programming and that they respond well to graphical illustration, this concise book adopts a visual approach to programming. Throughout the text, programs that use graphical images are emphasized to clearly demonstrate all the important programming principles. The authors use a spiral approach to programming concepts; introducing concepts simply early on, then in a more sophisticated way later, (e.g., objects are integrated throughout five chapters). *Java for Students* emphasizes the use of applets but also shows how to program free-standing applications. The authors have been careful to put together a text that covers the powerful features of Java and presents the language to students as both a fun and useful tool.

Problem Solving with C++ Walter J. Savitch 2005

This text explains C++ and basic programming techniques in a way suitable for beginning students. It adapts to the syllabus created by the instructor rather than making you adapt to the book. The order in which the chapters and sections are covered can easily be changed without loss of continuity in reading the text.

Refactoring for Software Design Smells - Girish Suryanarayana

2014-11-11

Awareness of design smells - indicators of common design problems - helps developers or software engineers understand mistakes made while designing, what design principles were overlooked or misapplied, and what principles need to be applied properly to address those smells through refactoring. Developers and software engineers may "know" principles and patterns, but are not aware of the "smells" that exist in their design because of wrong or mis-application of principles or patterns. These smells tend to contribute heavily to technical debt - further time owed to fix projects thought to be complete - and need to be addressed via proper refactoring. *Refactoring for Software Design Smells* presents 25 structural design smells, their role in identifying design issues, and potential refactoring solutions. Organized across common areas of software design, each smell is presented with diagrams and examples illustrating the poor design practices and the problems that result, creating a catalog of nuggets of readily usable information that developers or engineers can apply in their projects. The authors distill their research and experience as consultants and trainers, providing insights that have been used to improve refactoring and reduce the time and costs of managing software projects. Along the way they recount anecdotes from actual projects on which the relevant smell helped address a design issue. Contains a comprehensive catalog of 25 structural design smells (organized around four fundamental design principles) that contribute to technical debt in software projects Presents a unique naming scheme for smells that helps understand the cause of a smell as well as points toward its potential refactoring Includes illustrative examples that showcase the poor design practices underlying

a smell and the problems that result Covers pragmatic techniques for refactoring design smells to manage technical debt and to create and maintain high-quality software in practice Presents insightful anecdotes and case studies drawn from the trenches of real-world projects

Mastering Algorithms with C - Kyle Loudon 1999

A comprehensive guide to understanding the language of C offers solutions for everyday programming tasks and provides all the necessary information to understand and use common programming techniques. Original. (Intermediate).

A Complete Guide to Programming in C++ Ulla Kirch-Prinz 2002

This guide was written for readers interested in learning the C++ programming language from scratch, and for both novice and advanced C++ programmers wishing to enhance their knowledge of C++. The text is organized to guide the reader from elementary language concepts to professional software development, with in depth coverage of all the C++ language elements en route.

Problem Solving and Computer Programming Using C - Binu A. 2010

Programming Abstractions in C++ - Eric Roberts 2015-02-05

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. This text is intended for use in the second programming course Programming is a matter of learning by doing. Eric Roberts' *Programming Abstractions in C++* gives students opportunities to practice and learn with engaging graphical assignments. A client-first approach to data structures helps students absorb, and then apply the material. Teaching and Learning Experience This program presents a better teaching and learning experience—for you and your students. It will help: Improve Student Comprehension with a Client-first Approach to Data Structures: To aid in student understanding, this book presents the full set of collection classes early. Defer the Presentation of C++ Features that Require a Detailed Understanding of the Underlying Machine: Introducing collection classes early enables students to master

other equally important topics without having to struggle with low-level details at the same time. Engage Students with Exciting Graphical Assignments: An open-source library supports graphics and interactivity in a simple, pedagogically appropriate way. Support Instructors and Students: The companion website provides source code, sample run PDFs, answers to review questions, and more.

Data Structures and Problem Solving Using C++ - Mark Allen Weiss 2003

Data Structures and Problem Solving Using C++ provides a practical introduction to data structures and algorithms from the viewpoint of abstract thinking and problem solving, as well as the use of C++. It is a complete revision of Weiss' successful CS2 book Algorithms, Data Structures, and Problem Solving with C++. The most unique aspect of this text is the clear separation of the interface and implementation. C++ allows the programmer to write the interface and implementation separately, to place them in separate files and compile separately, and to hide the implementation details. This book goes a step further: the interface and implementation are discussed in separate parts of the book. Part I (Objects and C++), Part II (Algorithms and Building Blocks), and Part III (Applications) lay the groundwork by discussing basic concepts and tools and providing some practical examples, but implementation of data structures is not shown until Part IV (Implementations). This separation of interface and implementation promotes abstract thinking. Class interfaces are written and used before the implementation is known, forcing the reader to think about the functionality and potential efficiency of the various data structures (e.g., hash tables are written well before the hash table is implemented). Throughout the book, Weiss has included the latest features of the C++ programming language, including a more prevalent use of the Standard Template Library (STL).

Data Structures and Program Design in C - Robert Leroy Kruse 1997 Progressing from the concrete to the abstract, and using a number of case studies and sample programs, this text explores structured problem solving, data abstraction, software engineering principles, and the

comparative analysis of algorithms as fundamental tools of program design. This edition aims to strengthen the documentation by including informal specification (pre- and post-conditions) with all subprograms. It treats recursion much earlier and emphasizes it repeatedly throughout, also revising all programs to emphasize data abstraction, to develop and employ reusable code, and to strengthen uniformity and elegance of style. New topics covered include splay trees, red-black trees, and amortized algorithm analysis. There are also new case studies, new exercises and programming projects, and Internet access to the source code for all the programs and program extracts printed in the text.

Java - Walter Savitch 2014-03-03

Note: You are purchasing a standalone product; MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for ISBN-10: 0133862119/ISBN-13: 9780133862119. That package includes ISBN-10: 0133766268/ISBN-13: 9780133766264 and ISBN-10: 0133841030 /ISBN-13: 9780133841039. MyProgrammingLab is not a self-paced technology and should only be purchased when required by an instructor. Java: An Introduction to Problem Solving and Programming, 7e, is ideal for introductory Computer Science courses using Java, and other introductory programming courses in departments of Computer Science, Computer Engineering, CIS, MIS, IT, and Business. It also serves as a useful Java fundamentals reference for programmers. Students are introduced to object-oriented programming and important concepts such as design, testing and debugging, programming style, interfaces inheritance, and exception handling. The Java coverage is a concise, accessible introduction that covers key language features. Objects are covered thoroughly and early in the text, with an emphasis on application programs over applets. MyProgrammingLab for Java is a total learning package. MyProgrammingLab is an online homework, tutorial, and assessment program that truly engages students in learning. It helps students better prepare for class, quizzes, and exams—resulting in better performance in the course—and provides educators a dynamic set of tools for gauging individual and class

progress. Teaching and Learning Experience This program presents a better teaching and learning experience—for you and your students. Personalized Learning with MyProgrammingLab: Through the power of practice and immediate personalized feedback, MyProgrammingLab helps students fully grasp the logic, semantics, and syntax of programming. A Concise, Accessible Introduction to Java: Key Java language features are covered in an accessible manner that resonates with introductory programmers. Tried-and-true Pedagogy: Numerous case studies, programming examples, and programming tips are used to help teach problem-solving and programming techniques. Flexible Coverage that Fits your Course: Flexibility charts and optional graphics sections allow instructors to order chapters and sections based on their course needs. Instructor and Student Resources that Enhance Learning: Resources are available to expand on the topics presented in the text. Data Structures - Elliot B. Koffman 2016

Computational Thinking Karl Beecher 2017-08-11

Computational thinking (CT) is a timeless, transferable skill that enables you to think more clearly and logically, as well as a way to solve specific problems. With this book you'll learn to apply computational thinking in the context of software development to give you a head start on the road to becoming an experienced and effective programmer.

Solving PDEs in C++ - Yair Shapira 2012-06-07

In this much-expanded second edition, author Yair Shapira presents new applications and a substantial extension of the original object-oriented framework to make this popular and comprehensive book even easier to understand and use. It not only introduces the C and C++ programming languages, but also shows how to use them in the numerical solution of partial differential equations (PDEs). The book leads readers through the entire solution process, from the original PDE, through the discretization stage, to the numerical solution of the resulting algebraic system. The high level of abstraction available in C++ is particularly useful in the implementation of complex mathematical objects, such as unstructured mesh, sparse matrix, and multigrid hierarchy, often used in numerical

modeling. The well-debugged and tested code segments implement the numerical methods efficiently and transparently in a unified object-oriented approach.

Data Abstraction and Problem Solving with C++ - Frank M. Carrano 2005

Designed for a second course in computer science, this textbook introduces the data abstraction technique for building walls between a program and its data structures, and presents various abstract data types and their implementations as C++ classes. The author evaluates the advantages and disadvantages of array-based and pointer-based data structures, and explains the concepts behind recursion, inheritance, polymorphism, algorithm efficiency, and balanced search trees. Annotation : 2004 Book News, Inc., Portland, OR (booknews.com).

Design Patterns - Erich Gamma 1995

Software -- Software Engineering.

Problem Solving, Abstraction, and Design Using C++ - Frank L. Friedman 2007

Problem Solving, Abstraction, and Design Using C++ presents and reinforces basic principles of software engineering design and object-oriented programming concepts while introducing the C++ programming language. The hallmark feature of this book is the Software Development Method that is introduced in the first chapter and carried throughout in the case studies presented.

Data Abstraction and Problem Solving with C++ - Frank M. Carrano 2016-02-26

For courses in C++ Data Structures Concepts of Data Abstraction and Manipulation for C++ Programmers The Seventh Edition of Data Abstraction & Problem Solving with C++: Walls and Mirrors introduces fundamental computer science concepts related to the study of data structures. The text Explores problem solving and the efficient access and manipulation of data and is intended for readers who already have a basic understanding of C++. The "walls and mirrors" mentioned in the title represent problem-solving techniques that appear throughout the text. Data abstraction hides the details of a module from the rest of the

program, whereas recursion is a repetitive technique that solves a problem by solving smaller versions of the same problems, much as images in facing mirrors grow smaller with each reflection. Along with general changes to improve clarity and correctness, this Seventh Edition includes new notes, programming tips, and sample problems.
Problem Solving, Abstraction, and Design Using C++ - Frank L.

Friedman 1994

Using C++, this book presents introductory programming material. Only the features of C++ that are appropriate to introductory concepts are introduced. Object-oriented concepts are presented. Abstraction is stressed throughout the book and pointers are presented in a gradual and gentle fashion for easier learning.