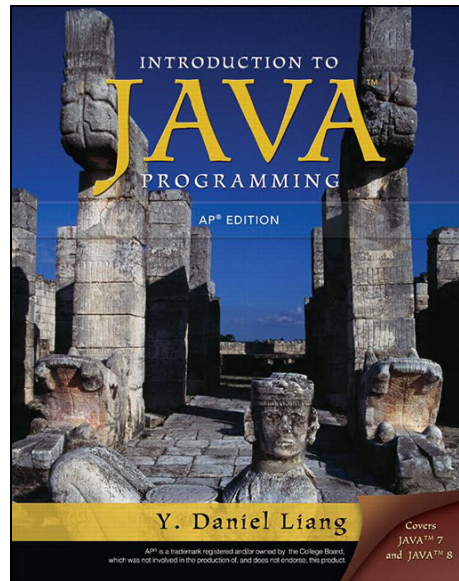


A Correlation of

Introduction to Java Programming

AP® Edition, 10th Edition ©2017



To the

Advanced Placement Computer Science A



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AP® Topics Mapped to the Text

AP Computer Science A is equivalent to a first-semester, college level course in computer science. The course introduces problem solving and programming using Java. The topics are outlined in <http://media.collegeboard.com/digitalServices/pdf/ap/ap-course-overviews/ap-computer-science-a-course-overview.pdf>. Here is the mapping for the topics to the text.

<i>AP® Topic</i>	<i>Covered in the Text</i>
Part I.A Program and class design	<ul style="list-style-type: none"> • Program design is discussed throughout the book. • Class design is discussed in Chapters 9–13.
Part II.A Implementation techniques	<ul style="list-style-type: none"> • Simple program implementation is introduced in Chapters 2–5. • Method implementation is presented in Chapter 6. • Class implementation is covered in Chapters 9–13.
Part II.B Programming constructs	<ul style="list-style-type: none"> • The if-else, switch, and conditional statements are covered in Chapter 3. • The loops are covered in Chapter 5. • The arrays are covered in Chapters 7 and 8. • The classes and objects are covered in Chapters 9–13.
Part II.C Java library classes and interfaces included in the AP Java Subset	<ul style="list-style-type: none"> • The AP Java subset classes and methods are all covered, including the toString, equals methods in the Object class (Sections 11.6, 11.10), the Integer and Double classes (Section 10.7), the String class (Section 4.4 and Section 10.10), the Math class (Section 4.2), the ArrayList class (Section 11.11), and the List interface (Section 13.8).
Part III.A Testing	<ul style="list-style-type: none"> • Program testing is discussed throughout the book.
Part III.B Debugging	<ul style="list-style-type: none"> • Debugging techniques are covered in Chapter 2.
Part III.C Runtime exceptions	<ul style="list-style-type: none"> • Chapter 12
Part III.D Program correctness	<ul style="list-style-type: none"> • Program correctness is covered throughout the book.
Part III.E Algorithm analysis	<ul style="list-style-type: none"> • Chapter 7 and Chapter 14
Part III.F Numerical representations of integers	<ul style="list-style-type: none"> • Chapter 2
Part IV.A Primitive data types (int, boolean, double)	<ul style="list-style-type: none"> • Chapters 2 and 3
Part IV.B Strings	<ul style="list-style-type: none"> • Sections 4.4 and 10.10
Part IV.C Classes	<ul style="list-style-type: none"> • Chapters 9 and 10
Part IV.D Lists	<ul style="list-style-type: none"> • The ArrayList class is covered in Section 11.11 and List interface is covered in Section 13.8.
Part IV.E Arrays (1-dimensional and 2-dimensional)	<ul style="list-style-type: none"> • Chapters 7 and 8
Part V.A. Operations on data structures	<ul style="list-style-type: none"> • Chapters 7, 8, 10, and 13
Part V.B Searching	<ul style="list-style-type: none"> • Linear Search is covered in Section 7.10.1. • Binary search is covered in Section 11.10.2.
Part V.C Sorting	<ul style="list-style-type: none"> • Selection sort is covered in Section 7.11.1. • Insertion sort is covered in Section 7.11.2. • Merge sort is covered in Section 14.8.