

Encourage Confident Programmers

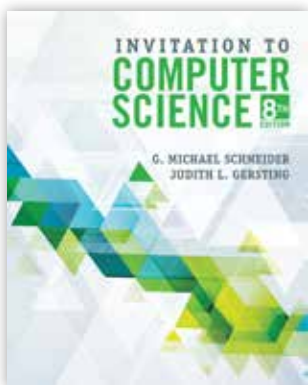
Preparing Students for Computer Science AP[®] Exams

From programming labs to practice exams, learn how National Geographic Learning, a part of Cengage, has the tools for you to teach your students how to effectively write and test programs and think critically to problem solve in the world of IT.

AP[®] Computer Science Principles

What's this course about? Course Highlights:

- » Does not have a designated programming language
- » This course incorporates computational thinking practices that set clear expectations of what students will do in the course:
 - Draw connections between different computing concepts
 - Create computational artifacts
 - Use Abstraction to develop models and simulations of natural and artificial phenomena
 - Analyze problems and artifacts
 - Describe computation and the impact of technology and computation
 - Collaborate to investigate questions using data sets and to produce computational artifacts



Best Bet

Invitation to Computer Science, 8e

G. Michael Schneider, Judith L. Gersting

8th edition ©2019

9781337561914

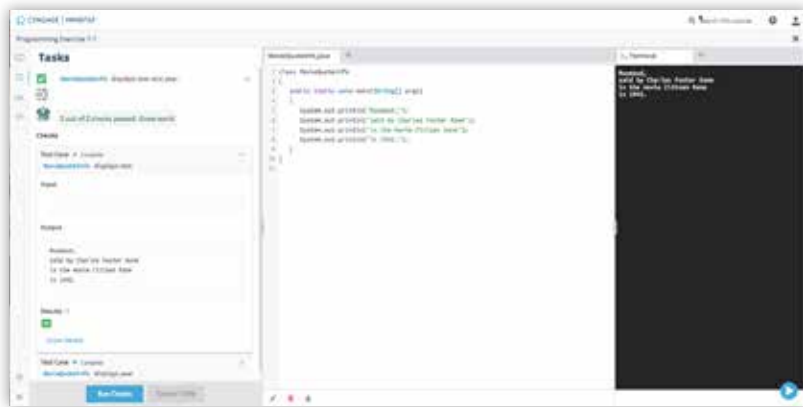
- Flexible, non-language-specific text
- Uses an algorithm-centered approach to provide a foundation in computing
- Special interest boxes and timely content highlight topics such as privacy, drones, cloud computing, and net neutrality.
- 20 hands-on labs
- End of chapter exercises increase in difficulty and include challenge problems that can be completed as a group
- Optional online modules for C++, Java, Python, C#, and Ada integrate seamlessly for the flexibility to teach a specific programming language.



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Invitation to Computer Science, 8th Alignment to AP® Computer Science Principles BIG IDEAS



Hands-on Lab Experience now in MindTap—the online course solution for CTE courses with the full, interactive eBook, study and annotation tools, auto-graded assessments, programming labs, and data analytics.

Students will be confident coders after working through the MindTap Learning Path with Hands-on Programming labs in chapters 9-10 offering practice in Java, C++, and Python languages. These labs allow students to code directly in an Integrated Development Environment (IDE) from their web browser.

Programming Labs offer:

- Lab instructions
- Code Editor where students make changes to files in their project and auto-saves as they work
- Students test and run code, viewing their output as well as a list of any bugs or errors and receive the chance to correct before submittal
- Teacher reporting shares insights into student tests, code edits, and final program output

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AP[®] Computer Science, A

What's this course about? Course Highlights:

- Design, implement, and analyze solutions to problems
- Use and implement commonly used algorithms
- Develop and select appropriate algorithms and data structures to solve new problems
- Write solutions fluently in an object-oriented paradigm
- Write, run, test, and debug solutions in the Java programming language, utilizing standard Java library classes and interfaces from the AP[®] Java subset
- Read and understand programs consisting of several classes and interacting objects
- Read and understand a description of the design and development process leading to such a program

*This course requires 20 hours of hands-on structured lab experiences to engage students in individual or group problem solving.



Best Bet

Java Programming

Joyce Farrell

©2019

9781337397070



Java Programming, 9e, is written for beginner programmers using a hands-on approach, and the lab activities have been tested on the current version of Java.

- Code figures, frequently 25 lines or less, illustrate one concept at a time. All Callouts identify and highlight important code statements, while abundant screen captures show exactly how program output appears.
- Review questions, programming exercises, game zone, debugging exercises, and case problems keep readers involved in learning.



MindTap for Java Programming includes Coding Labs as well as Code Snippets.

Coding snippets allow students to practice individual coding skills as many times as they like:

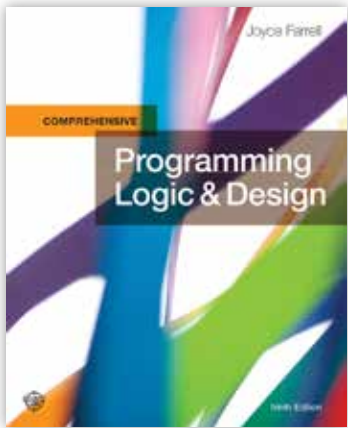
- Run code to see the intended output
- Then play around with code provided, changing variable names, parameters, etc.
- Run code again to see what does and does not work

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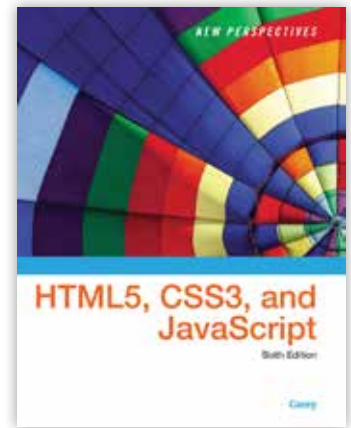
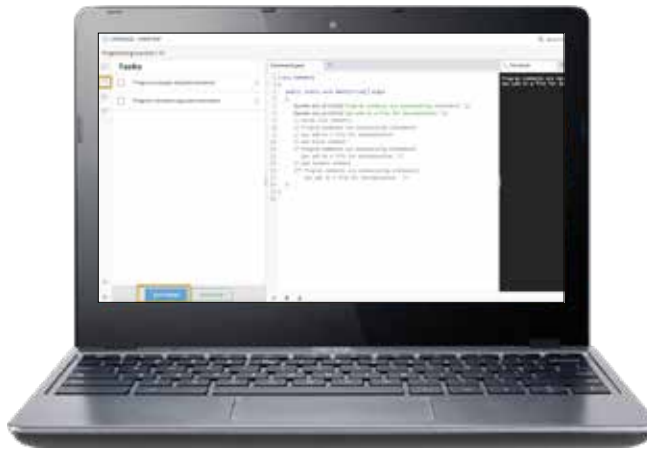
```
#selection at the end -add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is the active ob
#mirror_ob.select = 0
#me = bpy.context.selected_objects[0]
#me.data.objects[me.name] = 1
```

Need more Hands-On Practice?

Programming Labs available now for:



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