

AP® Computer Science A Summer Assignment 2019

Welcome to AP Computer Science A! The AP® Computer Science A course focuses on fundamental programming algorithms using the Java language. This summer assignment has you practicing pre-requisite skills and introduces new content to help you transition more smoothly during the first week of the course.

A list of information about the class can be found by visiting the College Boards website (<https://apstudents.collegeboard.org/courses/ap-computer-science-a>).

All of these assignments should be completed by the first day of school.

Have a wonderful summer!

You may contact me by email: aerdem@fultonscienceacademy.org

(1) Introduction to programming: algorithms and pseudocode

1. Complete the following TedED lesson: [What's an Algorithm?](#) . Watch the video and complete the "Think" portion of the lesson.
2. Think of something you do every day. Develop an algorithm to describe that process step-by-step to someone who would completely unfamiliar with the process. You must include at least 4 actions, 1 decision, and 1 repeatable action. Make sure to *italicize your actions*, bold your decisions, and underline your repeatable actions.
3. Convert your algorithm to pseudocode. Visit the [BBC Bitesize: Designing an Algorithm](#) website to learn more about pseudocode.

(2) CodeHS Assignment

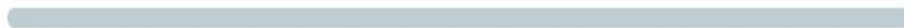
Create an account on CodeHS.com, then you should signup the course at <https://codehs.com/go/756B9>

Please finish the following Units.



1. INTRODUCTION TO PROGRAMMING IN JAVA WITH KAREL THE DOG

17 LESSONS



View Lessons



2. BASIC JAVA

16 LESSONS



View Lessons

(3) SoloLearn Assignment

Go to [SoloLearn.com](https://sololearn.com) and complete the Java Tutorial. Once you have completed the tutorial, go into summer Assignment on Fsaconnect and post a screenshot of your certificate.

Two Things to Note:

1. When you register, use your real name so that it will show up on your certificate
2. Some topics in the sixth section are beyond the scope of APCS, however, they are still interesting and worthwhile to learn.

(4) Programming: Introduction to Java

1. Go to the CodingBat (<https://codingbat.com/java>) Java programming site
2. Choose three problems from Warmup-1 (<https://codingbat.com/java/Warmup-1>) and solve them. It's ok to use the solution button!
3. With each solution, you need to **comment** on each line of the code. Comments are short notes throughout the code that summarize or explain the intent of the code. For each line of code, explain what the code is doing.
4. There's likely a lot of code you don't understand or may not be able to interpret right away. Research the keywords such as public, Boolean, int, &&, ||, and !, <=, >=, String to be able to explain what each means in your comments.
5. Cite all sources you used to help you find answers.

How to submit your work:

Create a new document and complete each of the assignments one through four above. Make sure you complete each portion of every number and clearly label your responses.

Include your name at the top of your document and convert it to a pdf. On the first week of class, you will be directed to upload this document to the fsaconnect in your course.