



AP CSA—Summer Assignment—Dr. Boser

If you are just beginning to code...start here

Resources to learn some computing basics and do some intro programming

This **CS50 Harvard course is a great review** of all the topics discussed in AP CSP class but with more detail and great videos from a Harvard professor, to reinforce a lot of topics for you. The youtube videos can be watched on their own (without joining the edX class which is free if its not for credit.

<https://pll.harvard.edu/course/cs50-introduction-computer-science?delta=0>

You can also check out [khan academy CSP](#) or <http://code.org> computer science principles on youtube—some good videos

Understanding the different AP classes for computer science—why take one over the other?

1. —note that CSP is language ‘agnostic’ and can be taught in any language the teacher chooses-- <https://youtu.be/C8e19APClpc>
2. Longer discussion more general—with Ajay! <https://youtu.be/WJ4cmV7c08A>

Summer AP CSA Class Assignment: 3 main things to do

LEARN some Java(unit 1), KNOW the AP exam and curriculum and GET inspired to learn to code~

Your Summer assignment is (read on for details)

1. **Learn basic JAVA (Unit 1 of our Interactive OnLine CSisAwesome Book—Be sure to sign up in my “coding rooms” or Runestone classroom so your work is saved** see details below)
2. **Read materials at AP CSA College Board** about the exam—and curriculum
3. **Get inspired to Code!!**
 - a. **Watch the movie CODE:** debugging the gender gap and find ways to get inspired
 - b. **Honors Society:** Think about how to recruit others and make computer science skills more part of your life/ helping others—read about what you can do as part of a CSHS.

DETAILS:

PART 1: Learn some Java (everything up to Unit 2 on objects)

Main Summer Assignment for APCSA

1. **First--join the new coding rooms app**
<https://app.codingrooms.com/app?joinCode=C-ULJy4EH>
 - MUST Complete Unit 1 on Runestone or in coding rooms- MUST sign in to one of these
 - **Coding rooms** has an interactive way to have us use the csisawesome materials. Here’s the link to join my Coding Rooms. Email me if there is an issue the join Code is **C-ULJy4EH**
2. **Next—check out the table of contents and read**
<https://runestone.academy/ns/books/published/csawesome/index.html> (is more ‘readable’ but less intuitive with exercises perhaps-- you need to sign in to each separately)



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Visit [AP Computer Science A Java Course](#) for information on the curriculum

3. **See other resources—e.g., Youtube** has good videos from the college board and also some engaging students (so far, I'm really impressed with Ajay! Isn't he adorable??
 - <https://youtu.be/JYLJbVECJxs>). [Other resources linked here](#)
 - You will be able to use **AP classroom** once the course is made live in July

Part 2 of your summer assignment: Get an overview of what is expected this year by reading the main **AP college Board AP CSA materials** (course exam and description)

- **Course overview:** <https://apcentral.collegeboard.org/pdf/ap-computer-science-a-course-overview.pdf>
- **Full Description:** <https://apcentral.collegeboard.org/courses/ap-computer-science-a/course>

(see course at a glance and walk-through of the description—the full description may be a bit dense (at very bottom) but you can check out some of the example questions and FRQs there.

Part 3 (a and b) is to GET INSPIRED!! (Read or Watch something about Women in Tech!)

#3a—Pick your own OR watch the powerful documentary about **women in Computer Science** now free on youtube. It includes interviews with top people in the field : **CODE debugging the gender gap** <https://youtu.be/jlb6Qrvgt0Y> Or Check out the book/Movie **“Girl Code”**

Check out some fun stickers you can buy on RedBubble or elsewhere for Women who Code for your laptop



Find some cool images and designs at https://dribbble.com/tags/women_code

#3b Learn more about how you can participate in our new **CS Honors Society**. **Think about how you want to run it next year.** <https://www.csteachers.org/page/computer-science-honor-society>

Be sure to talk to your friends about the class and joining our new CS Honors Society—Involves service projects related to CS like teaching girls to code e.g., GirlsWhoCode or city kids e.g. code in the schools

[Mentoring and Internship Resources for next year through UMD/UMBC](#)

Check out local resources available to us at UMD (MCWIC is at college park-- <https://inclusion.cs.umd.edu/mcwichoused> and CWIT at UMBC <https://cwit.umbc.edu/>).

Looks like there is a mentoring programming for extra help with CSA—here's a link to last years application

<https://docs.google.com/forms/d/e/1FAIpQLSeYxfqf0VGY2VkijrAKNBQMO9LtWZV-2j27vNO4RB8us4hdvA/viewform>