Resources to learn differences between AP CSP and CSA **and practice basic programming skills (to refresh what you know)**

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

 khan academy CSP or http://code.org computer science principles on youtube—some good videos

Understanding the differences in CSA vs CSP AP classes for computer science——

brief description: https://youtu.be/C8e19APClpc Plus–a Longer discussion, with Ajay! https://youtu.be/WJ4cmV7c08A (Ajay has a wonderful series to help you through CSA which I highly recommend!)

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**
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. **Find your own book, movie or podcast about coding and future technologies e.g., AI. and write about what you've learned to share with the class.** 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 cs club..

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

Main Summer Assignment for APCSA

1. **Join Runestone Academy (if you have an account you can just switch classes)**
   - MUST **Complete Unit 1 on Runestone** - MUST sign in –email me for account sign up–
   - **maryvalepreparatoryschool_csawesome_spring24** (name of runestone course)

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)

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). You will be able to use **AP classroom once** the course is made live in July
   - Big list of links for Java learning–see code.org materials etc. Other java learning resources

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 help recruit others to join our cs clubs and stem classes at Maryvale**. Think about starting an honor society. https://www.csteachers.org/page/computer-science-honor-society**

Be sure to talk to your friends about taking a CS or STEM class and joining our CS Club —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/).