

AP Computer Science Principles - Summer Assignment 2017 - 2018

Future AP Computer Science Principles Student,

Welcome to AP CSP! I am eagerly anticipating a great year of Computer Science Principles. To ensure the best start for everyone next year; I have prepared a summer assignment that reviews basic CSP concepts.

To complete this assignment, you will need a computer with an internet connection. When you return to school, there will be an online submission location to submit your completed work. Completed work must be submitted by SEPTEMBER 8th; late work will not be accepted.

I hope you are looking forward to an exciting year of CSP. You are all certainly fine students, and with plenty of motivation and hard work you should find AP CSP a successful and rewarding experience.

Finally, I recommend that you spread out the summer assignment. Please do not try to complete it all in the final week of the summer. CSP takes time to process and grasp at a level necessary for success in AP CSP. Remember, AP CSP is a college level course. Taking a college level course in high school is difficult, requires dedication, and is a great investment in your education so prepare yourself and arrive ready to learn.

AP Computer Science Principles is a demanding class and success depends on ability, development of prerequisite skills, and a willingness to study. Advanced Placement classes require more study time than the typical high school class and this course runs on an accelerated schedule. The requirements for the AP test are covered prior to the exam that is administered in the first week of May.

A list of those requirements can be found by visiting the College Boards website (<https://apstudent.collegeboard.org/apcourse/ap-computer-science-principles>).

Student Name

Date

Student Signature

Have a wonderful summer!

You may contact me by email: ameyer@mycsp.org

Read

Your summer assignment includes reading the book, “Blown to Bits”. This book is available for free over the internet by clicking on the link below.

Computing has transformed our lives in so many ways. Mobile computing, where we are constantly connected to others and to the world via our mobile devices, is challenging us right now to develop new norms about privacy, security, the ownership or openness of data and information, and other issues. Like any technology, mobile computing has both positive and negative impacts. We need to reflect on these impacts in general and we also think about the impacts we will create as we build our own mobile apps.

One way we will be addressing these issues in this course is by reading and discussing *Blown to Bits: Your Life, Liberty, and Happiness after the Digital Explosion*. This book is available entirely online with a separate PDF file for each chapter. You can access the website through the link below. Save it in your phone/tablet or other e-reader device so you can access it anywhere:

http://www.bitsbook.com/wp-content/uploads/2008/12/B2B_3.pdf

Note that throughout the year, you may be given quizzes on the vocabulary and other content from this book. In addition, your midterm will include a significant amount of material from this book. For this reason, while you are reading, I am requiring you to complete:

- 1) The attached vocabulary list (find definitions YOU understand and write them down in the space below)
- 2) The attached double entry journal sheet for each chapter.

Below are optional assignments you may choose to do, but are not required that may further prepare you for the class.

1. Code.org Accelerated Course
<http://studio.code.org/join/CKWBJY>
2. Create an account, click catalog, and then click on JavaScript 10 Hours.
<https://www.codecademy.com/learn/javascript>

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Blown to Bits Vocabulary

Chapter 1:

Bit:

Blacklist:

Character:

Cyberspace:

Data Center:

Data:

Data Network:

Disk Drive:

Intellectual Property:

Moore's Law:

Network:

Processor:

Social Networking:

Whitelist:

Chapter 2:

Ad Hoc:

Database:

Data Aggregation:

Data Mining:

Data Repository:

Data Sources:

Digital Detritus:

Dossier:

EDR:

Encode:

Encryption:

IP Address:

Metadata:

Query:

RFID:

Chapter 3:

Algorithm:

Analog:

ASCII:

Cloud Computing:

Cryptography:

Digital:

Digital Signal:

Processing:

Download:

Lossless Compression:

Megabyte:

Megapixels:

Modeling:

OCR:

Pixels:

Raster:

Render:

Spam:

Chapter 4:

Background

Binary

Bot

Cache

firewall

foreground

HTML

URL

Chapter 5:

AES

certification

authority

ciphertext

DES

decryption

encryption

packet

Chapter 6:

centralized

systems

commons

DRAM

DRM

flooding

gigabyte

storage, TPM

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Double-Entry Journal (Chapter 9)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text:

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Double-Entry Journal (Chapter 2)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text:

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Double-Entry Journal (Chapter 3)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text:

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Double-Entry Journal (Chapter 4)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text:

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Double-Entry Journal (Chapter 5)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text:

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Double-Entry Journal (Chapter 6)

Directions: As you read, right down four ideas from this part of the chapter that you believe are critically important to this topic. You can quote the authors or summarize them. Include the page number. Then write your reaction to the idea.

The Text (Quote or Summary) Page:

My Reaction to the Text: