

## ***AP Computer Science-Principles: Summer Reading***

There is no required summer reading for APCS-Principles. The AP Computer Science courses do not require them. Both AP-Computer Science A and AP Computer Science principles are designed as a first year course. With a little determination you can start with zero knowledge on the topic and be successful in the course.

However, it is important that you don't let your brain wither over the summer. If you are an athlete, do you lie on the couch all summer? No! You exercise! You work out! You train! Just like every other AP course, there is a lot of material to cover, and the more time you spend working out your brain, the easier next year will be. For AP Computer Science - Principles, that means knowing the basics of programming (variables, if statements, loops, and functions). If you have that basic experience in any language APCS-Principles will be a lot easier.

### **Getting Started**

Do you have zero programming experience? No problem, there is an easy and fun to use site to get you started:

<http://www.crunchzilla.com>

Crunchzilla hosts Code Monster, Code Maven and Game Maven. The site is designed to take you from zero knowledge of programming and get you all the way to the point where you are writing your own games. Code Monster assumes you are starting from scratch and have no idea what is going on. Code Maven also starts from scratch, but it introduces the ideas at a faster pace. Game Maven assumes that you have the basics down and starts showing you the advanced stuff have to make games.

### **I like Games**

No worries. There are lots games that have coding as their mechanic.

#### First a few on the ipad:

*Cargobot*

Free game where you drag and drop the commands that move boxes around

*Human Resources Machine*

You write the code that controls a worker as he files papers in a mindless corporation (this is way more fun that it sounds)

*7 Billion Humans*

The sequel to Haman Resources Machine where you control more than one worker at a time

#### How about Steam:

*Opus Magnum*

Use programming style gadgets to brew potions and other magical items

[https://store.steampowered.com/app/558990/Opus\\_Magnum/](https://store.steampowered.com/app/558990/Opus_Magnum/)

*Baba is You*

Write the rules to control the characters as they interact with the world

### **Problem Solving and Battling Others**

Games are fun, but there is something really fun about pitting your brain against others. Here are some examples where you are attempting solve problems and battling others

<https://CodingBat.com>

Basic problem solving covering a wide range of topics.

<https://Codinggame.com>

Problems solving in contests play against others. See who can solve the problem first. Other players share their solutions, helping you get better.

<https://codecombat.com/>

The same idea as Codinggame, but the challenges are more game like

## **I Want to Get Started Now!**

You have all of the basics down. You don't want to practice any more. You just want to get started on the course material. If all of those statements are true, more power to you. Contact Mr. Parets, he will send you a copy of the digital course work and you can get started today.

## **Final Words**

If you have questions or you get stuck you can email me any time during the summer. Don't stay confused. Email your questions and I will answer as soon as possible.

Have a fun summer, and Good Luck!

-Mr. Parets

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