APCSA Final Project Description

The final project for this AP® Computer Science A course is designed to let you follow your own interests in a topic related to computer science. Your options are vast. Here is a list of possibilities: learn a programming language, research a topic, write a game, create Web pages, prepare skills to be used in a summer internship, or design and write an app. You can work solo or work in small teams. This document will be updated as questions need answering.

You need to generate one or more ideas. Write them down in your online journal for this final project. (More about the journal will be discussed in class.) Talk with your teacher to get further ideas, to brainstorm, and/or to get a go-ahead. Think about how your final project will be presented to your teacher. Perhaps it is a working game or a research paper. Use the Final Project folder in Schoology to find resources. Here are two: Final Project Journal Examples links to past students' journals. If you want scaffolding to write a game, check out the Lab folder.

Your journal is part of your project. A Google doc template journal is generated just for you to use and for your teacher to add comments. Each time you work on the Final project, journal your experience. It is a perfect place to record your progress. Journals vary with the focus of the project. Here are three examples:

- If you are taking a course online, you would record what lesson you completed, what assignment you finished, and what you learned. For example,

  March 23, 2020 learnpython.org
  I finished these lessons: Hello, World? Variables and Types, Lists, Basic Operators, and String formatting. I learned that the Python language shares similarities to java, except for the weak typing.

- If you are doing research, you would record what web pages you read and summarize the pages. Include facts that fascinated you or might help you write your paper. For example,

  March 23, 2020
  https://www.wired.com/story/researchers-trying-build-better-blockchain/
  The folklore of blockchains - namely, data security so "others can't sabotage" and "decentralization" - pull in others to believe in it. But can it scale? Tse is a "convert" because ...

- If you are writing a game, you would record your progress. For example,

  March 23, 2020 Stacks and queues
  In order to write solitaire, stacks and queues must be learned. I watched:
  - HarkerRank Data Structures: Stacks and Queues
    - LIFO - Last in First out - Stack of plates
      - isEmpty
      - peek
      - remove

    - push
    - pop
  - FIFO – First in First out – Movie theater queue
    - Add
    - isEmpty
    - peek
    - remove
- Java #2 - Queue & Stack Implementation Tutorial - Linked List Programming Explained from Scratch
  - Not surprising, a repeat.

