AP Computer Science A

What is AP CS A?

- In-depth programming course
- Less diversity of content than AP CSP
- Focus on algorithms and object-oriented program design
- All programming is in Java
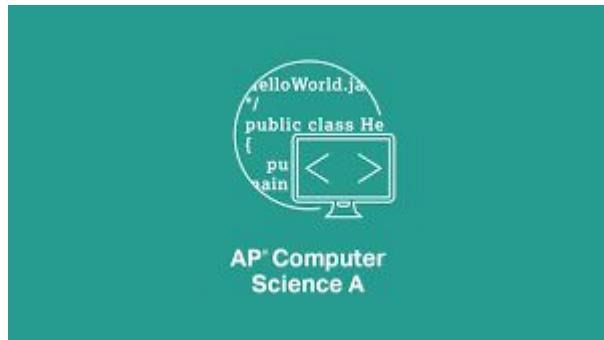- Apply mental tools to solving puzzles

Topics Covered

- Data Types, Variables & Arithmetic
- Conditional Statements & Logic
- Loops & Iterations
- Functions
- Classes & Objects
- Polymorphism
- Inheritance
- Algorithms & Data Structures
- Additional Object Oriented Programming Concepts

General Information

- 3 hours per week
- Equivalent to 1st semester programming course
- No prerequisites
- Just be comfortable with basic Algebra/Geometry
- Project oriented course
  - We will spend most of the time coding & solving problems

AP Exam

- 1 exam in May with 2 sections
  - Multiple Choice (50%)
    - 90 minutes
    - 40 questions
  - Free Response (50%)
    - 90 minutes
    - 4 questions
- More info can be found at AP Central CS A Exam page

What Can I do with CS A?

- Code Android Apps
- Design robust programs that can be run anywhere
- Use algorithms to efficiently solve problems

What Can I Study After CS A?

- College Majors that expand on CS A
  - Computer Science
  - Information Technology
  - Engineering, in particular Electrical & Computer
  - Finance & Economics
  - Data Science

Why Take CS A?

- Learning to code resembles learning a foreign language more than learning math or science
- Knowing one programming language in depth makes it easier to learn other programming languages
- Many of the algorithm tools you learn here can be applied to problems outside of CS
- You can tackle real-world programming problems after taking CS A