

# Welcome to AP Computer Science Principles 2023

Dear Student,

Welcome to AP Computer Science Principles! This course is an exciting course meant to broadly expose you to the field of computer science, which involves not only programming, but the general ideas of computational thinking and how computers impact our everyday lives. We'll learn a large variety of topics this year that will prepare you for further study in computer science, and also prepare you to have a general understanding of computer science no matter what career path you choose in the future!

1. **Join our Google Classroom:** dkl7au7 (I already invited all of you, but here is the code just in case)
2. **Create a Coding Rooms account** (if you already have one skip this step)
  - a. Go to <https://www.codingrooms.com/>
  - b. Click on the button in the top right that says sign up
  - c. Sign up with Google and your school account.
  - d. When you are given options for programming languages pick: HTML CSS JS, and 2 others (it doesn't matter what other 2). This creates shortcuts for you when you go to create new projects. Click next when done.
3. **Join my Coding Rooms classroom:** <https://app.codingrooms.com/app/?joinCode=C-Wxf8QxW>  
If the link doesn't work join with class code: C-Wxf8QxW
4. **Mom's Bakery:** Open this assignment in our coding rooms classroom. Watch the videos on Google Classroom to build the Mom's Bakery website.
5. **Project:** Once you have completed Mom's Bakery, use your new found skills to create a website for AP Computer Science Principles. The details for the assignment are listed below.

## HTML and CSS

For a good introduction to programming HTML and CSS are essential. Many programs these days are web based or have some web based component. For that reason alone every programmer should have a minimal understanding of the 2 languages.

## Experienced with HTML and CSS

For those already experienced with HTML and CSS feel free to use your past projects or even do a bit of refreshing with other online resources. codeHS, codeacademy both have free courses.

## Summer Assignment (Major Assessment)

You will be creating an AP CSP website utilizing the skills acquired during the Mom's bakery lessons. In order to be considered complete all requirements must be met. There are tips at the bottom of this doc, so make sure to check them out if you run into any troubles or have any questions.

### Criteria:

1. Your page must include the following segments:
  - a. Header
  - b. Menu
  - c. About
  - d. Course Content
  - e. Exam Info
  - f. Footer

2. Header: Must have a banner with website heading (similar to mom's bakery header). Feel free to adjust this to look the best for your site.
3. Menu: must include links to each section of the webpage
4. About: In the about section you will have 2 questions with answers.
  - a. What is Computer Science?
  - b. What is AP Computer Science Principles?
  - c. Utilize the AP CSP College board website (<https://apstudents.collegeboard.org/courses/ap-computer-science-principles>) for the second question and use a browser search to find the answer to the first. Please write these answers in your own words, do not copy and paste from your source.
5. Course Content: There are 5 main areas for this course listed under Course content (Big ideas) on the Collegeboard website (<https://apstudents.collegeboard.org/courses/ap-computer-science-principles>). You will use images and info from that section to make a visually appealing course info section. To compare to Mom's bakery think of the recommendations section. I provided multiple pictures for each of the topics in 2 different sizes. You do not need to use every image, but you must represent every topic (there are 5 of them). Feel free to mix up the sizes to make something visually appealing.
6. Exam Info: This must be displayed using a table. You can find the exam information on the same page on the Collegeboard website (<https://apstudents.collegeboard.org/courses/ap-computer-science-principles>). There are 2 parts to the exam with 2 separate dates. Make sure to indicate that info.
7. Footer: Include your last name and the copyright date (this year) in the footer section.
8. Your webpage must look good, that is the point of web design.

I highly recommend completing each of these sections along with the Mom's website components, so after you learn about the header for Mom's bakery you should code the header to your CSP website and so on. Once you complete each section on the Mozer site you can go back and even skip around in the section, so you will have that source to refer to. If you continue to have difficulties after ample tries please do reach out to me, I will be more than happy to help (especially to those that were not in intro CS).

#### **Provided images:**

- Banner options
- Images for each course content area in big and small sizes
- Background options: how Mom's bakery used the wood panels
- PNG files: these are miscellaneous transparent background images that you can utilize where you see fit.

#### **TIPS:**

1. Images: When using images on a webpage you can adjust the size of it by referring to either the width or the height in the HTML tag and setting it to a pixel size:

```

```

Only adjust one of the aspects, not both (you will ruin the ratio and your picture will not look right). You can mess around with different pixel amounts until it is the desired size.

2. When referring to an image you need to include its entire path. In the Mozer demo all images are readily available and do not require a path. For your CSP webpage I put all of the images in a folder to make them more organized, so that means to use an image you will need to include the images folder in its reference path:

```

```

If you notice an image not loading this may be the reason, so check your file paths.

3. Backgrounds: by default all background images are set to repeat, so if it doesn't fit in the designated area it will appear more than once. If you don't want that to happen you will need to put the following in the CSS with the background image:

```
background-repeat: no-repeat;  
background-position: top center;
```

The position one is adjustable as well, so feel free to mess with top, center, right, bottom, etc.

4. Image fading: If you want to use an image in the background, but it is too bright or bold you can bring down its opacity in your CSS with the following

```
opacity: 80%;
```

You can adjust the percentage down to make it more opaque. Please note that the opacity line must be with the same CSS element as the background-image it will be referring to.

Please note, you are welcome to collaborate with your friends on this material, but **everyone needs to create their own individual website**. Part of the entire process of becoming a good programmer is making mistakes, struggling while building persistence and patience, and problem solving. Don't let yourself get discouraged! You are welcome to email me if you get stuck.

I'm looking forward to seeing you all in September and having an awesome year learning about computer science!!!  
Have a great summer!

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