

AP Digital Portfolio: Student User Guide for AP Computer Science Principles™

November 2016

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WELCOME

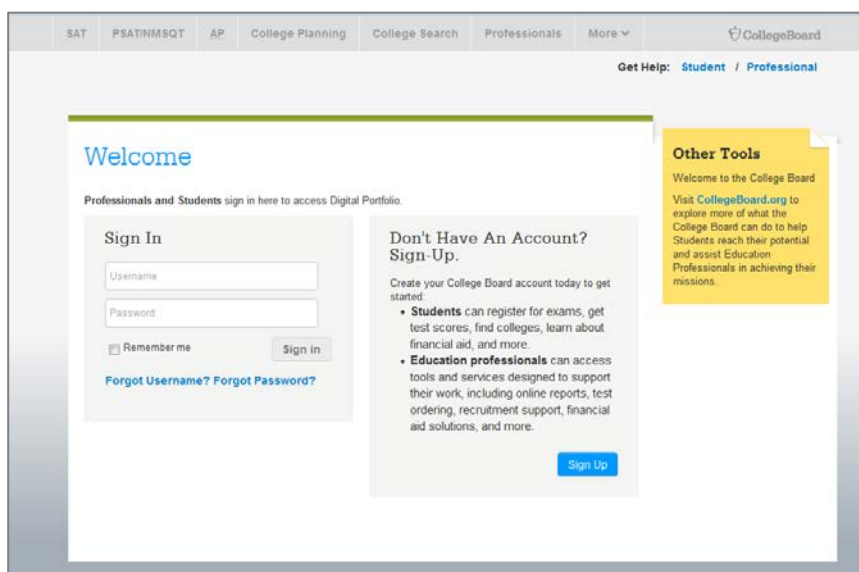
Welcome to AP Computer Science Principles! As part of this course you will work on two through-course performance tasks, Create and Explore. You will be uploading and submitting five final performance task artifacts via the AP Digital Portfolio, three artifacts for Create and two artifacts for Explore. These will be graded and form part of your final AP grade. This guide explains how to use the AP Digital Portfolio system.

- **Some key dates:**
 - November: You can start submitting performance task artifacts.
 - January to April 30: You must indicate whether you intend to take the end-of-course exam.
 - April 30: Deadline for submitting all final (5) performance task artifacts.

DIGITAL PORTFOLIO ACCESS AND CLASS ENROLLMENT

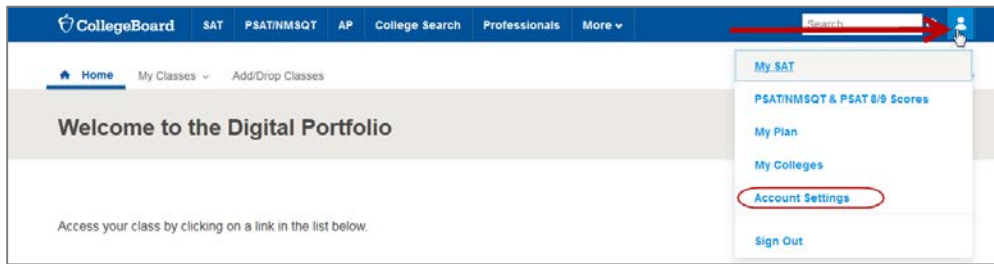
Log in Using Your College Board Username and Password

- Go to digitalportfolio.collegeboard.org and log in using your College Board username and password.
 - You may already have an account if you have taken an AP Capstone course in a prior year, viewed AP® scores, or registered for the SAT® online.
 - If you do not remember your account credentials, you can request your username or reset your password.
 - If you don't have an account, create a new account.

The image shows a screenshot of the College Board Digital Portfolio login page. At the top, there is a navigation bar with links for SAT, PSAT/NMSQT, AP, College Planning, College Search, Professionals, and More. The main content area is titled "Welcome" and includes a "Sign In" section with fields for Username and Password, a "Remember me" checkbox, and a "Sign in" button. Below the sign-in fields are links for "Forgot Username?" and "Forgot Password?". To the right of the sign-in section is a "Don't Have An Account? Sign-Up" section with a "Sign Up" button. A yellow callout box titled "Other Tools" is also visible on the right side of the page.

- Once you have signed in to your College Board account, you may be prompted to provide additional information.
- Be sure to select the correct high school in order to request enrollment in AP Computer Science Principles. Keep in mind that you will only see available classes at the school you attend.

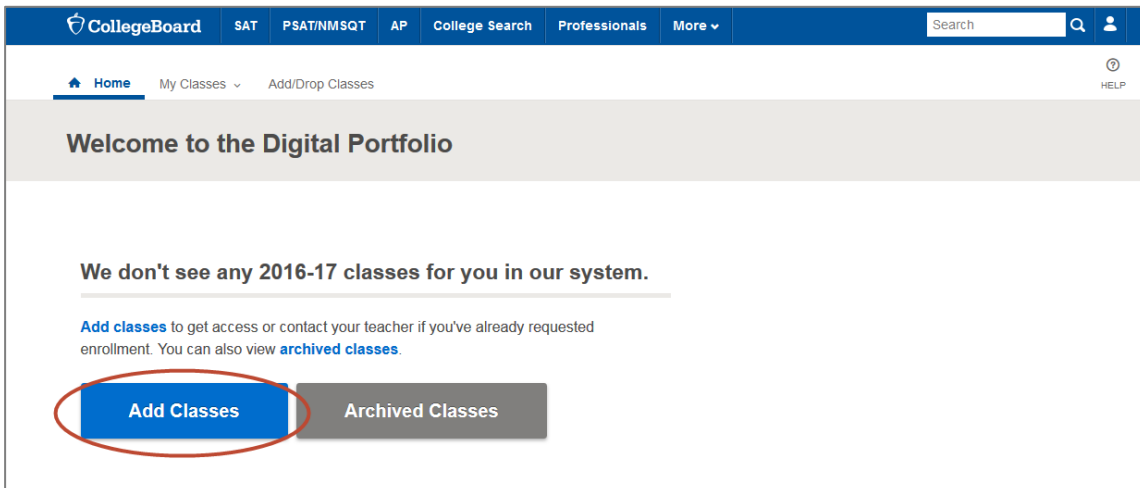
- You can confirm which school is associated with your account and change the school if necessary by clicking on person icon in the top-navigation menu and selecting 'Account Settings.'



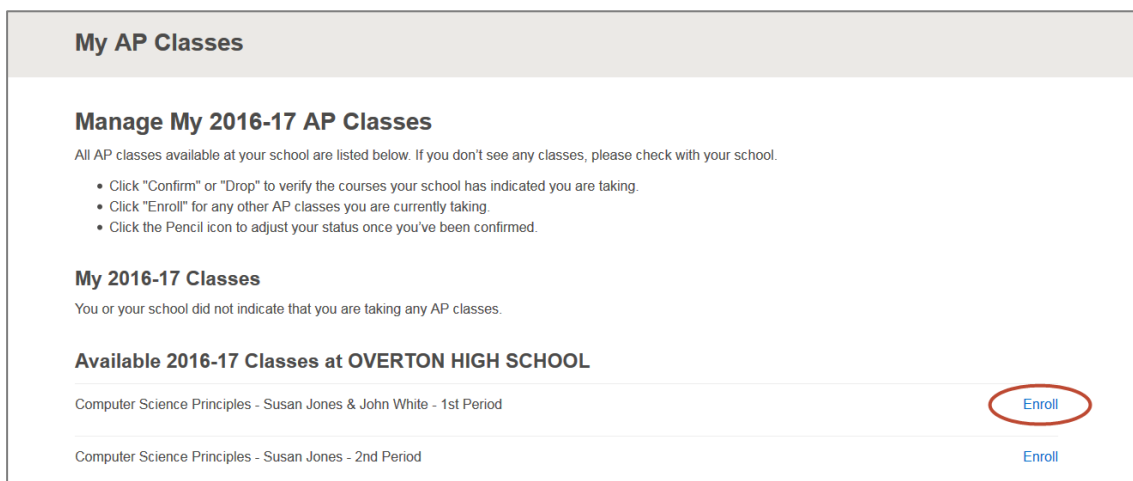
- If you are enrolling in a CSP course at a school other than the one you attend primarily, please see the section of this guide titled '**Enrolling in an AP Computer Science Principles Class at a Different School**'.

Enrolling in an AP Computer Science Principles Class at Your School

- Visit digitalportfolio.collegeboard.org and log in using your College Board student account and password.
- If you are not enrolled in an AP CSP class for the current academic year, you will be prompted to add a class by clicking the 'Add Classes' button.



- You will be redirected to the 'Manage My Classes' page and see a complete list of Digital Portfolio classes being offered at your school. You should request enrollment in the appropriate Computer Science Principles class.



- When you click 'Enroll', the screen will indicate that enrollment has been requested. You will not be able to access the Digital Portfolio content until your teacher has confirmed your enrollment.

Enrolling in an AP Computer Science Principles Class at a Different School

- If you are enrolling in CSP at a school other than your primary school, you should *temporarily* change your school in the Account Settings in order to enroll in the class.
- Visit digitalportfolio.collegeboard.org and log in using your College Board student account and password.
- Click on the person icon in the top-navigation menu and select 'Account Settings.'

- From there, you should find the school where you are taking AP CSP in by typing the name in the 'Where do you go to school?' field.
 - By default, the results will be filtered by your home zip/postal code. You can uncheck 'Use ZIP/Postal Code' to expand your results.
 - Once you have the correct school, you should click the 'Update' button to save changes.

- You should then enroll in the class using the steps above.
- Once you have enrolled, you should change your school back to your primary school.

SUBMITTING YOUR WORK IN THE DIGITAL PORTFOLIO

Access the AP Digital Portfolio

- Once your teacher has confirmed your enrollment request you should be able to access the Digital Portfolio by logging into digitalportfolio.collegeboard.org.

The screenshot shows the AP Computer Science Principles 1st Period course page. The navigation bar includes Home, My Classes, and Add/Drop Classes. The page title is AP Computer Science Principles 1st Period. The left sidebar has a Class Summary menu with options for Overview, Create, and Explore. The main content area is titled Overview and contains the following text:

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaborations skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world.

AP Computer Science Principles Policy on Plagiarism

A student who fails to acknowledge (i.e., through citation, through attribution, by reference, and/or through acknowledgment in a bibliographic entry) the source or author of any and all information or evidence taken from the work of someone else will receive a score of 0 on that particular component of the performance assessment task.

To the best of their ability, teachers will ensure that students understand ethical use and acknowledgment of the ideas and work of others, as well as the consequences of plagiarism. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

Create

- [Individual Video](#)
- [Written Responses](#)
- [Program Code](#)

Explore

- [Computational Artifact](#)
- [Written Responses](#)

Navigate Through the AP Digital Portfolio

- The left menu allows you to select from an overall course 'Overview' or drill down into each of the performance tasks for the course you are in.

The screenshot shows the AP Computer Science Principles 1st Period course page with the Individual Video section selected. The left sidebar menu is expanded to show the Create section with sub-options: Overview, Individual Video (highlighted with a red arrow), Written Responses, and Program Code. The main content area is titled Individual Video and contains the following text:

Submission Requirement

1. Video

Submit one video in .mp4, .wmv, .avi, or .mov format that demonstrates the running of at least one significant feature of your program. **Your video must not exceed 1 minute in length and must not exceed 30MB in size.**

File Upload and Submission

[Upload New](#)

Prepare your Work for Submission

- As part of the CSP course, you will be uploading and submitting final five performance task components via the Digital Portfolio. You must follow the guidelines for file format and size.
 - Explore
 - Computational Artifact (CA)
 - Supported File Types: .MP3, .MP4, .WMV, .AVI, .MOV, .WAV, .AIF or .PDF
 - No larger than 30MB
 - Video and audio files cannot exceed 1 minute (60 seconds)
 - Written Responses (WR)
 - Supported File Types: .PDF
 - No larger than 30MB
 - A downloadable template will be provided for you to use
 - Create
 - Video (IV)
 - Supported File Types: MP4, .WMV, .AVI, OR .MOV
 - No larger than 30MB
 - Video and audio files cannot exceed 1 minute (60 seconds)
 - Written Responses (WR)
 - Supported File Types: .PDF
 - No larger than 30MB
 - A downloadable template will be provided for you to use
 - Program Code (PC)
 - Supported File Types: .PDF
 - No larger than 30MB
- Written Responses need to be in PDF format. If you need help converting a file to PDF, please visit the section of this guide titled ***'Additional Information - Converting Your Documents to PDF'***.
- Computational Artifact and Individual Video can be submitted as videos. For additional considerations on how to create video files for submission, please visit the section of this guide titled ***'Additional Information – Creating Video Files'***.

Use AP CSP Written Response Templates

- Use of the Written Response Template can enhance the facilitation of the scoring process. It is highly recommended that you use the Written Response Template for both performance tasks.
 - Create - Applications from Ideas Performance Tasks: This template was developed to help ensure you provide a response to all the requirements in the Create Performance Task in an organized and properly labeled manner. The Written Response Template for this task should be used for sections 2a, 2b, 2c, and 2d.
 - Explore – Impact of Computing Innovations Performance Task: This template was developed to help ensure you provide a response to all the requirements in the Explore Performance Task in an organized and properly labeled manner. The Written Response Template for this task should be used for sections 2a, 2b, 2c, 2d, and 2e.

- To access the Written Response templates, navigate to the Written Responses page for the Performance Task they are working on. Then, should scroll down to the 'Download Pages or Word Template for Written Responses' section. Students can download MS Word or Pages versions of the template.

AP Computer Science Principles

4th Period

Class Summary

Create

- Overview
- Individual Video
- Written Responses**
- Program Code

Explore

Written Responses

Submission Requirements

2. Written Responses

Submit one PDF document in which you respond directly to each prompt. Clearly label your responses **2a – 2e** in order. **Your response to all prompts combined must not exceed 750 words, exclusive of the Program Code.**

Program Purpose and Development

2a. Provide a written response or audio narration in your video that:

- identifies the programming language;
- identifies the purpose of your program; and
- explains what the video illustrates.

(Approximately 150 words)

2b. Describe the incremental and iterative development process of your program, focusing on two distinct points in that process. Describe the difficulties and/or opportunities you encountered and how they were resolved or incorporated. In your description clearly indicate whether the development described was collaborative or independent. At least one of these points must refer to independent program development. *(Approximately 200 words)*

2c. Capture and paste the program code segment that implements an algorithm (marked with an **oval in section 3** below) that is fundamental for your program to achieve its intended purpose. Your code segment must include an algorithm that integrates other algorithms and integrates mathematical and/or logical concepts. Describe how each algorithm within your selected algorithm functions independently, as well as in combination with others, to form a new algorithm that helps to achieve the intended purpose of the program. *(Approximately 200 words)*

2d. Capture and paste the program code segment that contains an abstraction you developed (marked with a **rectangle in section 3** below). Your abstraction should integrate mathematical and logical concepts. Explain how your abstraction helped manage the complexity of your program. *(Approximately 200 words)*

Download Pages or Word Template for Written Responses

AP CSP Written Response Templates

Use of the Written Response Template can enhance the facilitation of the scoring process. It is highly recommended that students use the Written Response Template for both performance tasks. The Written Response Templates are available in Pages and Word formats and must be converted to PDF for final submission.

Create - Applications from Ideas Performance Tasks

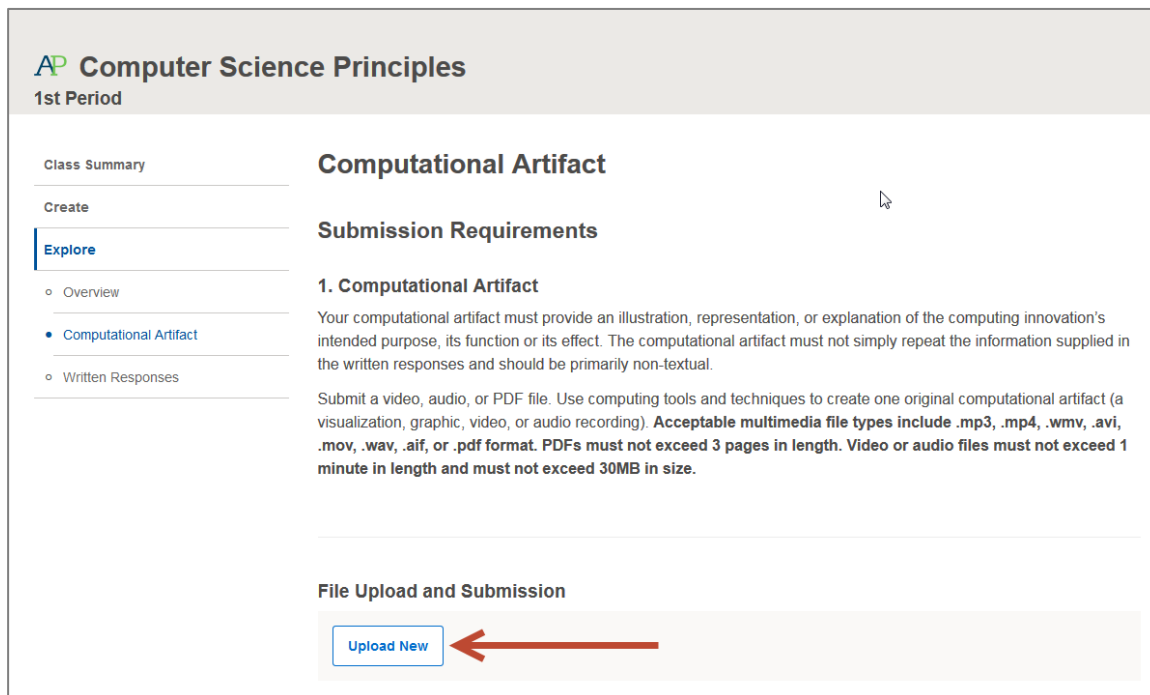
This template was developed to help ensure students provide a response to all the requirements in the Create Performance Task in an organized and properly labeled manner. The Written Response Template for this task should be used for sections 2a, 2b, 2c, and 2d.

[Create Written Response Template - Word Version](#)

[Create Written Response Template - Pages Version](#)

Upload and Download Draft Work

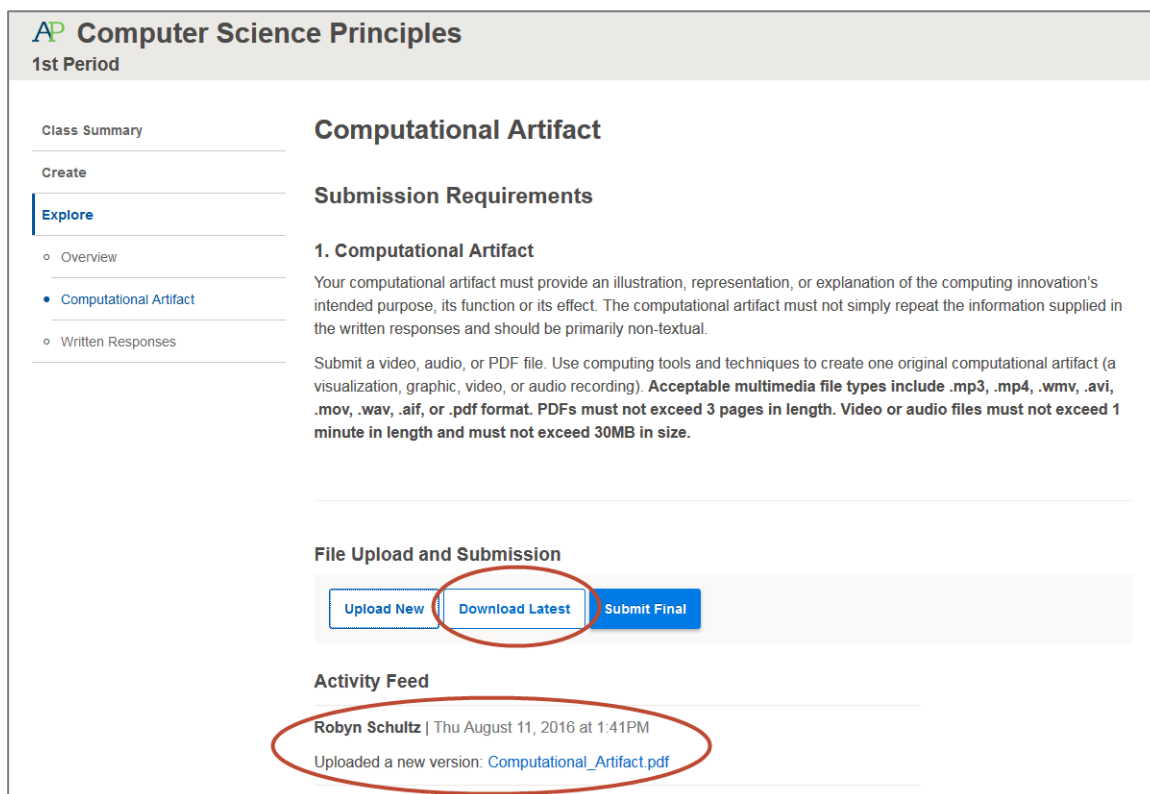
- Click on the performance task component for which you'd like to upload a document. Select 'Upload New' and indicate the file you wish to upload. When the upload is complete, you will see a comment in the activity feed, and the 'Download Latest' options will become available.



The screenshot shows the AP Computer Science Principles interface for the 1st Period. The main heading is 'Computational Artifact'. Under 'Submission Requirements', it states: 'Your computational artifact must provide an illustration, representation, or explanation of the computing innovation's intended purpose, its function or its effect. The computational artifact must not simply repeat the information supplied in the written responses and should be primarily non-textual. Submit a video, audio, or PDF file. Use computing tools and techniques to create one original computational artifact (a visualization, graphic, video, or audio recording). **Acceptable multimedia file types include .mp3, .mp4, .wmv, .avi, .mov, .wav, .aif, or .pdf format. PDFs must not exceed 3 pages in length. Video or audio files must not exceed 1 minute in length and must not exceed 30MB in size.**

Under 'File Upload and Submission', there is a button labeled 'Upload New' with a red arrow pointing to it from the right.

- Once you've uploaded a document, it will be available for you and your teacher to download.
 - You can download the most recently uploaded document by clicking the 'Download Latest' button, or by clicking the link in the Activity Feed. Prior versions of a submission can be retrieved via the Activity Feed.



The screenshot shows the AP Computer Science Principles interface for the 1st Period. The main heading is 'Computational Artifact'. Under 'Submission Requirements', it states: 'Your computational artifact must provide an illustration, representation, or explanation of the computing innovation's intended purpose, its function or its effect. The computational artifact must not simply repeat the information supplied in the written responses and should be primarily non-textual. Submit a video, audio, or PDF file. Use computing tools and techniques to create one original computational artifact (a visualization, graphic, video, or audio recording). **Acceptable multimedia file types include .mp3, .mp4, .wmv, .avi, .mov, .wav, .aif, or .pdf format. PDFs must not exceed 3 pages in length. Video or audio files must not exceed 1 minute in length and must not exceed 30MB in size.**

Under 'File Upload and Submission', there are three buttons: 'Upload New', 'Download Latest', and 'Submit Final'. The 'Download Latest' button is circled in red.

Under 'Activity Feed', there is a message: 'Robyn Schultz | Thu August 11, 2016 at 1:41PM
Uploaded a new version: [Computational_Artifact.pdf](#)'. The entire message is circled in red.

Submit Work as Final

- **You must submit your work as final in order in order for your work to be sent to the College Board.**
- Once your teacher tells to do so, you should submit your written work as final.
- Remove your name and any other personally identifying information from written work prior to submitting final.
- Click on the performance task component that you want to submit as final. Click 'Submit Final' to submit the most recently uploaded file as final.

AP Computer Science Principles
1st Period

Class Summary

Create

Explore

- Overview
- Computational Artifact
- Written Responses

Computational Artifact

Submission Requirements

1. Computational Artifact

Your computational artifact must provide an illustration, representation, or explanation of the computing innovation's intended purpose, its function or its effect. The computational artifact must not simply repeat the information supplied in the written responses and should be primarily non-textual.

Submit a video, audio, or PDF file. Use computing tools and techniques to create one original computational artifact (a visualization, graphic, video, or audio recording). **Acceptable multimedia file types include .mp3, .mp4, .wmv, .avi, .mov, .wav, .aif, or .pdf format. PDFs must not exceed 3 pages in length. Video or audio files must not exceed 1 minute in length and must not exceed 30MB in size.**

File Upload and Submission

[Upload New](#) [Download Latest](#) [Submit Final](#) ←

Activity Feed

Robyn Schultz | Thu August 11, 2016 at 1:41PM
Uploaded a new version: [Computational_Artifact.pdf](#)

- A window will appear asking you to confirm several things before you complete your final submission:
 - *that you have reviewed the file and it is correct (checkboxes will remain inactive until you view your file)*
 - *that you have removed your name personally identifying information from your submission*
 - *that you understand that changes to your submission cannot be made after you complete the final submission process*

Final Submission ✕

You are about to submit the following as your final submission for Computational Artifact. You must click and open the file below to verify that it is correct.

[View File](#) [Computational_Artifact.pdf](#)

I have reviewed the uploaded file to ensure it is the correct version.

I have confirmed that my file does not contain my name or any other personally identifying information.

I understand that I will not be able to make any changes to my file once I complete the final submission process.

[Close](#) [Next](#)

- Then, you will **attest to the originality of your written submission.**

Final Submission ✕

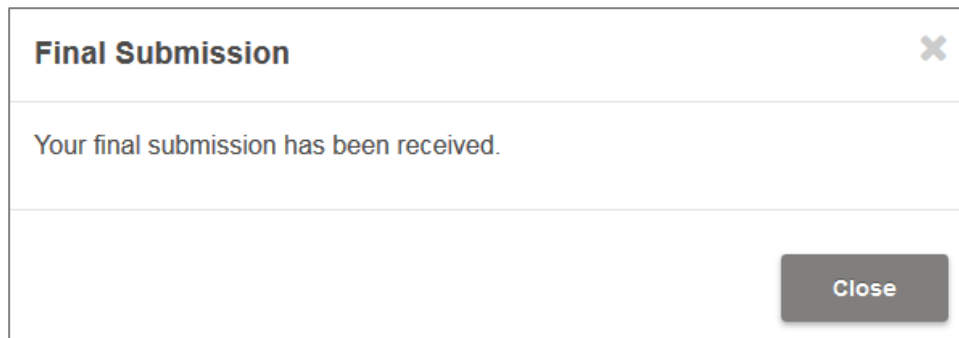
Attest to Originality

I hereby affirm that the work I am submitting is my own and that I have read and understand the [AP Computer Science Principles Policy on Plagiarism](#) .

[Close](#) [Submit](#)

- For Create Program Code, before attesting to the originality of your work, you will then be asked to indicate the programming language you used for your work. Your choice will NOT have an impact on your score.

- After clicking 'Submit' you will receive a confirmation window that your final submission has been received.



PREPARING FOR THE END-OF-COURSE EXAM

Indicate Your Intent to Take the AP End-of-Course Exam

- Starting in January, you will be prompted to indicate whether or not you intend to take the end-of-course exam. You must provide a response by April 30.
- You can indicate their intent-to-take exam question by navigating to the Overview page.

The screenshot shows the 'Overview' page for 'AP Computer Science Principles 1st Period'. A red arrow points to the 'Overview' link in the left sidebar. The main content area contains a question: 'Are you taking the AP Computer Science Principles end-of-course exam in May?' with a sub-note: 'You must indicate whether you are taking the end-of-course exam by April 30.' Below the question are two buttons: 'Yes' and 'No'. Underneath is a section for 'Enter Your 2017 AP Number' with a sub-note: 'You must indicate that you are taking the end-of-course exam before entering your AP number.' There is an input field and a 'Save' button. At the bottom, there is a 'Permission to Reuse Written Performance Task Materials' section with a paragraph of text and a radio button option: 'No, I do not grant the College Board these rights.'

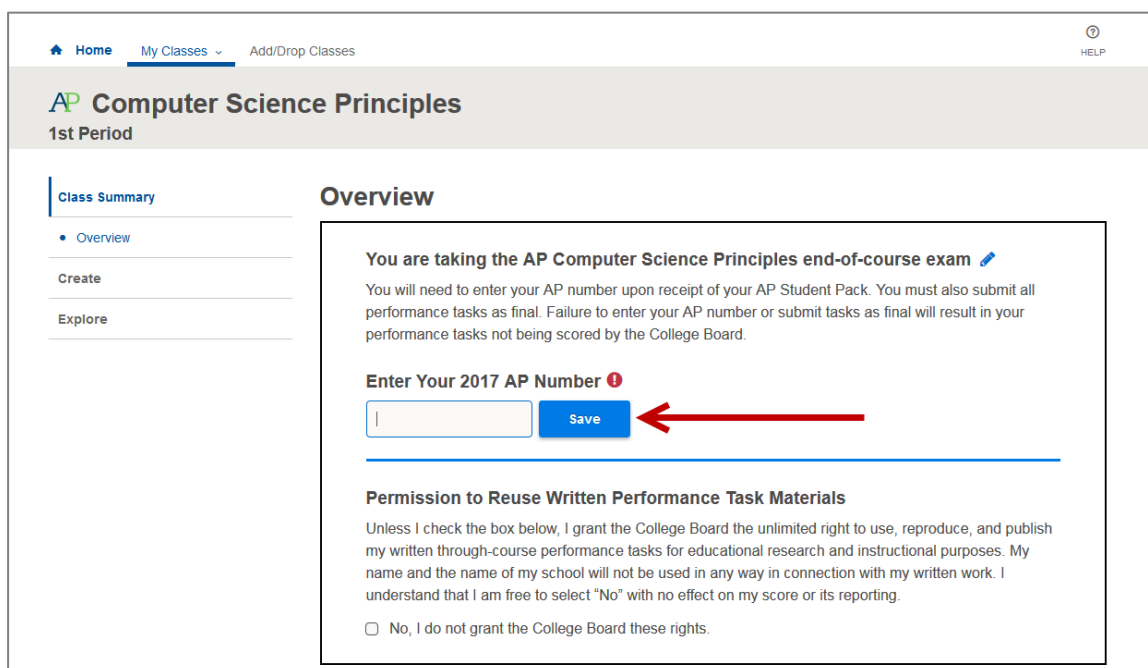
- Once you answer the question, you can edit your decision by clicking on the pencil icon.

This screenshot is similar to the previous one but shows the state after a decision has been made. The question now reads: 'You are taking the AP Computer Science Principles end-of-course exam' followed by a pencil icon. A red arrow points to this pencil icon. The 'Save' button is now blue and active. The rest of the page content remains the same.

- You must still work with your AP Coordinator to ensure an end-of-course exam is ordered on your behalf.**

Enter Your AP Number into the Digital Portfolio

- You will receive your AP Student Pack in early April from your teacher or AP Coordinator. Each Student Pack contains a unique AP number that you should use for all AP exams you take in a given school year.
- Starting April 1, you can enter your AP number by logging in to the AP Digital Portfolio and navigating to the Overview page.



The screenshot shows the AP Digital Portfolio interface for AP Computer Science Principles, 1st Period. The page is titled "Overview" and contains a section for entering the 2017 AP number. A red arrow points to the "Save" button next to the input field.

Home My Classes Add/Drop Classes HELP

AP Computer Science Principles

1st Period

Class Summary

- Overview

Create

Explore

Overview

You are taking the AP Computer Science Principles end-of-course exam

You will need to enter your AP number upon receipt of your AP Student Pack. You must also submit all performance tasks as final. Failure to enter your AP number or submit tasks as final will result in your performance tasks not being scored by the College Board.

Enter Your 2017 AP Number

Permission to Reuse Written Performance Task Materials

Unless I check the box below, I grant the College Board the unlimited right to use, reproduce, and publish my written through-course performance tasks for educational research and instructional purposes. My name and the name of my school will not be used in any way in connection with my written work. I understand that I am free to select "No" with no effect on my score or its reporting.

No, I do not grant the College Board these rights.

- Be careful when entering in your AP number – if incorrectly entered, you score reports may be delayed.
- Never use an AP number from a prior year and never share your AP number with another student.
- ***You must enter an AP number into the Digital Portfolio in order for your work to be sent to the College Board.*** All performance tasks that a student has submitted as final will automatically be sent to the College Board on April 30, as long as an AP number is associated with the Digital Portfolio account.

ADDITIONAL INFORMATION

Converting Your Documents to PDF

- For the Written Responses and Program Code submissions, you must upload a .pdf (or PDF) version of document. PDF stands for “Portable Document Format.”
- Recent versions of applications like: Word, PowerPoint, Pages, and Google Docs, have built-in features that allow you to save or export your file as a PDF. Instructions are provided below.
- If your software does not have a PDF option, visit the Adobe site and learn more about whether [Acrobat from Adobe Systems](#) can convert your document to PDF.
- You are responsible for ensuring that your file is properly formatted and readable. After you have created your PDF, be sure to check it by opening and reviewing your PDF in [Adobe Reader](#), a free application that can be downloaded from the Adobe site. The College Board is not affiliated with Adobe Systems and is not responsible for any issues associated with your use of the Adobe Systems converter. If you need technical support or have questions, please contact Adobe Systems directly.
 - **Microsoft Office (Word, PowerPoint)**
 - In Word, Powerpoint, and other Microsoft Office programs you will “Save as PDF.” Visit the Microsoft Office support page for more information about [“Save as PDF.”](#)
 - To save a Word or Powerpoint document as PDF:
 - Open your Word or Powerpoint document.
 - From the top menu select “File,” and select “Save As.”
 - In the dialog window, go to the drop-down menu for “Save as type,” and select “PDF.”
 - Click “Save.”
 - **Google Docs**
 - In Google Docs, you will “Download as” PDF. Visit the Google support page for more information on [“Download a file.”](#)
 - To download a Google Doc as a PDF:
 - Open your Google doc
 - From the top menu select “File,” and select “Download as,” and select “PDF Document (.pdf)”
 - **Pages**
 - In Pages, you will “Export to” PDF. Visit the Apple support page for more information or follow the steps below:
 - Open your Pages document.
 - From the top menu select “File,” and select “Export to,” and select “PDF.”
 - In the dialogue window select “Best,” image quality.
 - Choose a destination for the export and click “Export.”

Creating Video Files

- For the Computational Artifact and Individual Video submissions, you have the ability so submit audio or video files.
- These files must be *no larger than 30MB and are limited to 1 minute* in length.

- While you can use any method to produce the video, screen captures tools are known to generally create screen capture files of the appropriate sizes. An example of a web-based screen capture tool is:
 - Screencast-O-Matic (<http://www.screencast-o-matic.com/>)
- If you use other video tools, do not select HD resolution to help limit file sizes.
- Do not use YouTube to submit any video.