

AP Computer Science Principles

Summer Assignment

Benchmark Assessment



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Scan the QR code or click the following [link](#) to take the benchmark exam for AP Computer Science Principles. This exam should be taken BEFORE you begin the rest of the summer assignment. It will be used to assess what you may already know about the course content.



This is an untimed google form, but it cannot be resumed. You have one attempt to complete it. Please give yourself no more than 120 minutes (or 2 hours) and try your best with the questions. Use process of elimination!

The videos and questions below serve as a basic overview of some of the beginning course content. Please watch all videos and record detailed notes on each question. This document will be turned in for a grade at the beginning of the school year and the content recorded will be used as a reference guide as we begin class activities.

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Part 1 – Naming Conventions and VSC



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Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Create a hierarchical diagram showing examples of the folder structure, and file naming conventions for our APCSP course. This will serve as an example for you when you set up your own folder, so be specific.

Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Describe the steps to download Visual Studio Code (VSC) on your device.

2. List the extensions you will need to download on VSC.

3. Describe how you would open a preexisting folder on VSC.

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Part 1 – Naming Conventions and VSC



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Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. List the steps to download and unzip a file from PLTW or Trinket.

2. Why is it necessary to unzip and move files downloaded from PLTW or Trinket?

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Part 2 – Python Basics



Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. What is a built in module in Python?

2. What are assignment operators and what assignment operator is used in Python?

3. What does it mean for a program to run sequentially?

4. Where can you find an error message in VSC and what does the error message help us do?

5. Describe some of the basic features of the string data type.

Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Describe some of the basic features of the integer data type.

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Part 2 – Python Basics



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2. What is the difference between an integer and a float? What operation results in a float?

3. What denotes a comment in Python and why are they used?

Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Describe the basic features of a list. Include how lists are formatted and the various parts.

2. How do you change, add, and insert elements into a list?

3. Describe the different ways to remove elements from a list.

4. How can you access parts of a list (or split a list)?

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Part 2 – Python Basics



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Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Describe the basic syntax of a for loop.

2. What is iteration and why would a for loop be categorized as iteration?

3. Describe the built in range function. How does it work and what are the different ways to use it?

Watch the following [video](#). Record answers to the questions below in appropriate boxes. These responses should be detailed enough that you can reference them later on.

1. Describe the Boolean data type.

2. How is Boolean data related to conditional statements? What are conditional statements?

3. How are if statements and conditional statements related?

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4. What does it mean for an if statement to be considered selection?

5. Describe the basic parts of if, elif, else statements.

6. Describe the basic parts a while loop.