



2A EXPLAINED

**KEEP THE END IN MIND
WHEN DEVELOPING
YOUR APP**

2A EXPLAINED

OVERVIEW OF PROJECT

Create PT Survival Guide 2019/2020¹



Create PT Overview

Goal of the Task: Create a programming project of your own design and then explain the **purpose, process, algorithms and abstractions** used to build it. You have **12 hours** to complete this task.

What you Submit: (1) Video of running program (2) Written Responses to prompts 2a-d (3) PDF of program code

How you get a good score: The AP committee wants to see that you can:

- Design and write the code for a computer program with a topic of your choosing
- Describe how you identified and solved problems as you developed your program
- Write code for an algorithm and describe its purpose within your program
- Write code for an abstraction and describe its purpose within your program



CREATE 2A

ROW 1

ROW 1 – YES OR NO WILL BE PART OF 2A TASK

Reporting Category	Task	Scoring Criteria	Decision Rules	Scoring Notes
Row 1 Developing a Program with a Purpose	VIDEO & RESPONSE 2A	<ul style="list-style-type: none"> The video demonstrates the running of at least one feature of the program submitted. <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> The response (audio narration or written response) identifies the purpose of the program (what the program is attempting to do). 	<ul style="list-style-type: none"> Response earns the point if it explains the function of the program instead of identifying the purpose. Response earns the point if the illustrated feature runs, even if it does not function as intended. Response earns the point if the response is included in the video via narration or some form of closed captioning and addresses the purpose or function of the program. <p>Do NOT award a point if any one of the following is true:</p> <ul style="list-style-type: none"> a video is not submitted; or the video does not illustrate the feature mentioned in the response; or the video does not illustrate the running of the feature (screen shots or storyboards are not acceptable and would not be credited). 	<ul style="list-style-type: none"> Purpose means the intended goal or objective of the program. Function means how the program works.

You may have an idea of what type of project you want to create. Your project must have a purpose. A purpose must have these three parts:

Keeping the End in Mind

Purpose

You may have an idea of what type of project you want to create. Your project must have a purpose. A purpose must have these three parts:

My project is **a calculator, game, grade average, etc.**

for the typical **insert the person, group or age range for which this app is intended** to
be able to **explain the purpose (what problem does it solve).**

*Example: My project **Grocery Total app** is for the **average grocery store shopper** who needs to **keep track of the purchases as things are placed in the cart BEFORE going to the check out so that the person does not go over budget by accident.***

THREE PARTS TO YOUR PURPOSE

It must identify what your project is

It must identify what group of people would want to use this app

It must identify the problem it is to solve should person identified in the previous statement uses this app

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Function

Your project must explain how it accomplishes its purpose – describe the function of the working code

My project functions as **explain what it is and how it works to accomplish the purpose.**

Example: My project functions as a phone app that can, with input from the user, receive a scan of an SKU number and add the cost to a subtotal, then calculates the tax and finally gives the expected total to the user

FUNCTION

Must explain **HOW** it accomplishes the purpose

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Your video should be one of the LAST things you do for this project because:

1. Your code must be complete
2. You must incorporate/show the part of your project that relates to the algorithms and abstractions that were discussed in 2B and 2C

Your video must be LESS than 58 seconds so that it can be loaded to your digital portfolio. Remember, not only is the video uploaded, but hidden in the video is the metadata that will take up a little space. If your video is 30 to 58 seconds long, you will have no problem uploading your video.

You can (but not a requirement) narrate within your video. If you do narrate, prepare a script of all the things you need to mention in 2A so you do not forget anything.

VIDEO

2A

Purpose: The purpose of my project is to allow a user to play a game where they enter a range of numbers and they must guess a random number between that range in order to win.

Function: My program functions by first asking the user to input a maximum number to be guessed, then by selecting a random number within that range. Then, the user must guess that number, and every five guesses the user makes, they are alerted of such.

Language: The language I used was Python.

Video: The video shows me entering 10 as a range, then entering the numbers 1-8 incorrectly, until I enter 9 which is the correct answer. I then opt to play again, and do the same except with a range of 5. Finally I play again with a range of 50, and enter several numbers that are either too high or too low, until I enter 15, the correct answer.

2A RESPONSE EXAMPLE

This example helps the reader/grader be able to give you the point for 2a because it is written in such a way that you can't miss the things for which the reader is to look for when grading.

END
VIDEO NOTES #2

NOTES WILL BE AVAILABLE IN TEAMS