

PA Media and Design Competition Participation Agreement

Project ID 1271

The PA Media and Design Competition is designed to provide learning opportunities and help prepare students for real world circumstances. It is vital that the rules and guidelines are understood and followed by everyone involved.

Student(s) Responsibilities

By signing this form I am verifying the following:

- The work contained in my PA Media and Design Competition project is my own original creation;
- If any element is not my original work, it is cited;
- And I have obtained permission for any work that is not my own with written proof attached to this form

I understand that my project can and will be *disqualified* during or after a regional or state event if any of the following occur:

- This form is not properly filled out and/or displayed when the project is being judged;
- The project summary/narrative description is not properly filled out and/or displayed when the project is being judged;
- Copyrighted work is included in the project without the owner's permission;
- A planning document is not displayed/available that clarifies the process used to create the project;
- Violation of any guidelines specific to the category (for example, a movie or animation longer than five minutes, or a logo that is not displayed at 3"x3" size)

Student Name(s) *please print*

Student Signature(s)

Date

Nick Romaninsky

Nick Romaninsky

3-14-23

Sponsor Responsibilities

By signing this form I am ensuring the following:

- I have reviewed the project for appropriate content and copyright violations;
- I understand fair use guidelines do not apply in this competition environment;

Sponsor Name *please print*

Sponsor Signature(s)

Date

Brooke DeMarco

[Signature]

3-14-23

PA Media and Design Competition

Project Summary/Narrative Instructions

The purpose of the project summary is to provide details about your project to the judges. Keep in mind that you will not be with your project to explain it to them or answer questions. Use the narrative as a tool to clarify your purpose and give the judges your insight behind your project.

- Narratives are best presented in typewritten or printed form rather than handwritten form, although a handwritten narrative is acceptable. You may attach additional pages if necessary.
- When possible, summary items should be restated in the responses and each response should flow as a coherent piece of writing.
 - Item: Describe the project's objectives, vision, and/or overall purpose.
 - Response: The project's objectives are ...
- When listing items in the narrative, present them in an orderly format.
- The purpose of writing a brief description of the process used to create the project is to involve the reader enough so he or she can actually imagine the steps being described. Therefore, it is important to use specific and concrete details. Remember, we have five senses, not one or two. It's also meant to show a learning process and experience that may have been gained while building your project.
- If there are design elements in the project that are not original, be sure to cite their sources. If you have adapted an element please explain the process you used. Resource citing link:
http://www.lib.duke.edu/libguide/works_cited
- All summaries must have a full response. Answers left blank will affect your score on the rubrics. For any part of the summary that is not relevant to your project, put Not Applicable.
- The summary should have no spelling or grammatical errors - proofread your answers, mistakes will affect your score.

PA Media and Design Competition

On the day of the fair, don't forget:

- Participation Packet including:
 - Completed Signoff (page 1)
 - Completed Project Summary/Narrative
 - Completed Photographic Release Form (page 4)
- Completed planning document/storyboard/flowchart

For categories that require a computer display:

- Instructions on how to start your project
- Instructions on how to log in to your computer
- Power cord

PA Media and Design Competition Project

Summary/Narrative

ID # 1271

Project Title Rubik's Cube Solver

1. Describe the project's objectives, vision, and/or overall purpose. Why did you choose your topic? What kind of effect do you want to have on your audience?

I chose my project because I am very interested in Rubik's Cubes. I want my audience to experience the same thrill that I do every time that I solve a cube, without putting in as much work learning to solve the cube.

2. List the software applications used to create the project. List any additional equipment (scanners, digital camera, etc.) used in the creation of your project.

I used VSCode (a file editor), my printer, google docs, and GitHub to keep track of versions of my code.

3. Provide a brief description of the process used to create the project including the amount of time spent creating it and the names of all contributors.

I learned python using CS50x, which is an online class that teaches computer science, and from other online tutorials such as <https://www.w3schools.com>. Writing the code to solve the scrambled cube took about 20 hours, and creating the user interface that allows a person to input a scramble and get a solution took about 10 hours. I worked alone.

4. List any templates you may have used, altered, or modeled your project after, and describe the changes you made to adapt it to your project (if you did not use any templates, put Not Applicable).

Not Applicable

5. Cite ALL sources of information, audio, video, images, etc. used in your project, including your own work. For any element that is not your own original work and/or owned by someone else, written permission from the copyright owner is **REQUIRED** and should be attached.

I used the pygame library in my code, which is licensed under the GNU LGPL, found here:
<https://www.gnu.org/licenses/lgpl-3.0.en.html>

I used a CC license: <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

I also used the rubik_solver library in my code, which is licensed under the MIT license, found here:
<https://opensource.org/licenses/mit/>

6. Provide any additional information the judges should be aware of while evaluating the project.
The Rubik's Cube has 43,252,003,274,489,856,000 possible combinations, which can all be solved in 21 moves or less. There is an interesting article written on it here: <https://www.popsoci.com/science/article/2010-08/gods-number-revealed-20-moves-will-solve-any-rubiks-cube-position/>

If necessary, provide any information judges will need to know in order to operate/understand the program, or provide a step-by-step tutorial. Please make sure all passwords are removed from the computers to ensure the judges are able to access the projects.

Information to run the program can be found in the read me file.

Works Cited

Please use this page as a guide to citing your sources including the name of the creator/copyright owner, where the image, music, photo, etc. is located within your project, and a hyperlink to the original file if you downloaded it from the internet. You may create your own works cited page, but please make sure it includes all of the information requested. If there is a question about the source of your content, this is the information the judges need to see in order to know that you've gotten permission and/or used material that abides by the copyright rules.

Some tips on citing sources for the PA Media and Design Competition:

- Search engines such as Google, Creative Commons, Bing, etc. are NOT sources of information or elements that may be included in your project. They are merely tools you can use to make it easier to find the resources you want to use in your project. When citing a source from the internet, you need to include a hyperlink to the actual site in which you downloaded it.
- Creative Commons can be a helpful tool to find re-usable works, but it searches other sites such as Flickr and Wikimedia Commons which actually host the content you are searching for. An easy way to obtain the link to a file found on Creative Commons is by right-clicking the link of what you would like to use, and selecting "Copy Link Location" (depending on the browser you are using, the text may vary). You can then paste it into your works cited document. Remember, you still have to check the licensing to make sure that you can use the file as well as attributing who created it and if requested by the license, include permission from the author.

I used the pygame library in my code, which is licensed under the GNU LGPL, found here:
<https://www.gnu.org/licenses/lgpl-3.0.en.html>

I also used the rubik_solver library in my code, which is licensed under the MIT license, found here:
<https://opensource.org/licenses/mit/>

In FIG 2, I colored over an image found at: <https://pypi.org/project/rubik-solver/>. This is also part of the rubik_solver library, licensed under the MIT license.

In FIG 4, I used the creative commons images listed below and licensed here:
<https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Individual Images:

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_R.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_R%27.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_L.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_L%27.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_U.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_U%27.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_D.JPG

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_D%27.JPG

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_F.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_F%27.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_B.jpg

https://commons.wikimedia.org/wiki/File:Rubik%27s_cube_notation_for_1_layer_-_B%27.jpg

PHOTOGRAPHIC RELEASE FORM

I hereby grant the Chester County Intermediate Unit Board of Directors and administration permission to photograph/videotape my child/ward (print child's name) Nick Romanitsky and to publish his/her photograph/videotape and to identify him/her while he/she is participating in the PA Media and Design Competition.

Please check all that apply:

☒ I grant permission to photograph/videotape my child and to identify him/her by name and educational program.

☒ I grant permission to have photographs and video tapes containing my child's image and likeness and identifying my child by name posted on the Internet.

☒ I grant permission to have my child's project posted or linked to the PA Media and Design Competition website. **(All projects must be submitted as link or web-friendly file if you want them posted to the website.)**

☒ I understand that I do not have to grant permission and that my child will still be able to fully participate in the PA Media and Design Competition.

Emily Romanitsky
Parent/Guardian's Name (please print)

3/12/23
Date

Mountain View
School

Cumberland Valley
District

Emily Romanitsky
Parent/Guardian's Signature

Please return to:
Chester County Intermediate Unit
Attn: Diane Thomson
Educational Service Center
455 Boot Road
Downingtown, PA 19335
484-237-5016

or

To your child's PA Media and Design Competition School Sponsor