



Cover page

Project title: ColorMixer

Academic Year: 2022/2023

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Department Name: Computer Engineering

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Project Type Hardware

Supervisor Name: Aladdin Masri

Format:

- Single space, Times New Roman.
- 12 pt,
- Maximum 1 page.

Abstract Body:

Items must be provided in the Abstract:

- Why do you think this project is important? Please explain the significance of this Project in brief.
- In your point of view what are the important aspects that should be covered in the project?
- Objective(s): In your view, please explain the main objectives of the project.
- Methodology: Give a brief outline of the application development process.
- Had this project been done before? Are there any similar applications available today?
- **Note:** Please deliver this abstract early to ensure that your Project has been approved by the department's projects committee. **Registration will not be done without this approval.**



Project's Abstract:

A color mixer device that allows users to enter RGB (Red, green, blue) values of their desired color via a keypad or mobile application. The mobile app will enable users to take a picture of the color or upload an image from their gallery and scan the color needed.

Arduino Uno will be used as the microcontroller of this mixing device, when a command of mixing with the RGB values as parameters is received by the microcontroller it will convert the RGB values to CMYK (Cyan, Magenta, Yellow, Black) values and calculate the right amount of each color to produce the desired color, then checking if there is enough amount of color in each cup, if the required amount does exist Arduino will control the pumps using H-bridge to pull the required amount from every color to the output cup. A motor will then mix the CMYK colors to produce the desired result.

This device will benefit artists and art students by reducing the time and cost of color mixing. Additionally, it will eliminate the need to mix multiple shades of a color to achieve the right hue.

Unlike existing paint-mixing machines that are expensive and often lack mixing features, this device will be designed specifically for artists and art students, providing a cost-effective alternative to traditional paint-mixing machines.