

Project title: **Colors Mixer**

Academic Year: 2022/2023

Project Type: Hardware

Department Name: Computer Engineering Department

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Project's Abstract:

Carpenters often need to use different colors of paint to accomplish the required work, and these colors cannot be obtained directly, but are produced from a mixture of colors, and this process requires time and cost.

Colors Mixer enables carpenter to choose the appropriate color that he needs through mobile application, so the machine makes the appropriate mixture in the appropriate quantities to produce the required color.

This machine contains five tubes of different colors: black, white, red, green and blue, which are the basic colors for producing any color. It contains the tube in which the final paint will be placed. And a tube of thinner to clean the tube of paint after each operation.

Features of this machine:

- Connected with a mobile application via Bluetooth to choose the color.
- Check if the tube is full or empty by means of the sensor.
- Determine the appropriate colors and tubes to produce the required color.
- Mixing an appropriate amount of each color using motor to mix the colors.
- Pump the mixture after that into final tube if found using pump.
- Cleaning the tube by pumping an amount of thinner from the thinner tube after each mixing operation.

