PROJECT DEVELOPMENT DESIGN REVIEW

RESISTOR COLOR CODE PROJECT

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OUTLINE

- DISCUSS THE PURPOSE OF THE SOFTWARE
- REVIEW THE SOFTWARE DESIGN APPROACH
- IDENTIFY PROGRAM EXPECTATIONS AND OUTCOMES
- USE VISUAL AID TO ANALYZE PROGRAM BEHAVIOR

PURPOSE

- The purpose of this software is to take user input based on the visual inspection of a resistor, and provide accurate information on the rating, tolerance and resistance changes for the resistor being evaluated.

SOFTWARE DESIGN

- This design requires little more than the following:
  - Basic repetition loops to capture the physical description of each color band located on the resistor.
  - If statements to ensure proper response for each color identified on the resistor.
  - Pre-defined and user-defined functions, to simplify and modularize operations to keep the program neat and easy to read.
  - Use of self-identifying variables and commenting less obvious functions and variables, to prevent confusion and to facilitate ease of maintenance.
  - Use of basic math operations to evaluate and provide accurate resistor information.

EXPECTATIONS

- The immediate expectation is that a user can enter the colors associated with each band on the resistor and receive feedback via a message on the screen providing the following:
  - Overall rating of the resistor, in ohms.
  - The tolerance of the resistor
  - And the change in resistance that may occur within the first 1000 hours of use.
- The overall expectation is that this program may be useful for technicians that don't have this information committed to memory, or don't have a calculator ☺

STATE DIAGRAM

REFERENCES

(1) S. Gibilisco, "Resistor Color Codes", in *Beginner's Guide to Reading Schematics, 4th Edition*, USA: McGraw-Hill Education, 2018, pp195-197.

QUESTIONS?