Complex Computing Problem (CCP) Proposal

Title

"Makeup Product Recommendation System"

Team Name

GLAM CODERS

Group Members

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Problem Statement

Many makeup users face difficulty in selecting the right products, such as foundation, lipstick, or

blush shades, that suit their skin tone or preferences. This confusion leads to poor purchasing

decisions. A computerized system can simplify this process by recommending suitable products

based on user inputs.

Objectives

• To create a program that stores makeup product details (name, shade, category).

• To take user input (e.g., skin tone, product type, preferred color).

• To search and match the input with stored products using arrays and conditions.

• To display recommended products that meet the user's preferences.

Scope

• The program will focus on basic categories: foundation, lipstick, eyeshadow, and blush.

• Product information will be stored using arrays or lists.

• The system will handle multiple users in a single run.

• Users can update or view recommendations repeatedly during program execution.

Proposed Solution

• Use arrays to store product categories, shades, and skin tones.

• Implement loops and conditions to search and match user inputs with stored products.

• Allow users to select options (like skin tone: fair, medium, dark; product type: lipstick, foundation).

• Display a list of matching products as recommendations.

Complexity Justification

This is a Complex Computing Problem because it involves:

• Managing data using arrays and structured storage.

• Implementing searching and matching logic.

• Using loops, conditions, and functions for decision-making.

• Handling multiple inputs and producing varied outputs (not fixed).

• Extensible design — more products, categories, and shades can be added.

Expected Outcomes

• A working program that recommends makeup products based on user inputs.

• A practical example of applying programming fundamentals to a real-life scenario.

• Improved understanding of arrays, loops, conditions, and structured problem-solving.