

# Object Oriented Programming LAB

**Section:**

BSE-2A

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# Introduction:

This project is about Color Hunt, a fun and educational game that helps players learn and recognize colors better. The game shows words in different colors, and the player must choose the right color based on how it looks, not what the word says. It’s a great way to train the brain and improve focus. The game includes different modes, sound effects, and exciting levels to keep players interested and learning.

# Purpose:

The purpose of Color Hunt is to help players learn colors and think quickly in a fun way. Players can unlock new levels by scoring well and can track their highest score and lives. There’s also a mini game (Tic Tac Toe) that gives players another chance if they make a mistake. The game saves player progress in a simple file, so they can continue anytime.

**Key Features:**

* **Learn colors through play**
* **Fun game modes (Classic and Challenge)**
* **Score tracking**
* **Simple and colorful design**
* **Music and sound for more fun**
* **Mini game to earn back lives**

# Core Functions:

**Game Modes (Classic s Challenge):** The game features two modes: Classic and Challenge. In Classic mode, players match the color of the text to the color name, while in Challenge mode, players must do the same but within a lesser time limit for each round and greater difficulty level, making it more exciting and fast-paced.

**Score Tracking:** The player's score is tracked throughout the game. Players are encouraged to improve their scores with each round. Players continue playing indefinitely unless they choose to stop. The highest score of the player is displayed on the frame of the game.

**Sound Management:** The game includes background music, like the Pink Panther theme, and gives players control over it. They can choose to mute the music or have it play on

loop, providing a customizable sound experience. A popping sound is added when the buttons are clicked as well.

**Mini Game incorporation:** Additionally, the game asks the player if they want to play a game of tic tac toe when they choose 3 consecutive incorrect answers, if they win the game continues else it exits.

# Significance of the Code:

The code focuses on creating an interactive and engaging environment where players match color names with their displayed colors. The game also includes sound and score management to keep the experience immersive and motivating.

# Key Features of the GUI:

1. **Colorful and Engaging Design:**
   1. The game interface is built with vibrant colors that match the color-matching theme of the game. The text and background colors change dynamically to keep the environment engaging.
   2. The buttons, text, and backgrounds are designed using soft gradients, making them visually appealing and easy on the eyes. The game’s color palette is carefully chosen to provide a modern, professional look.
2. **Responsive and User-Friendly Layout:**
   1. The layout of the game is designed to ensure that the player can easily access all the necessary options. The buttons are large and clearly labeled, allowing players to focus on their gameplay rather than on figuring out the interface.
   2. There is a clear separation of game modes, score displays, and sound control, making it simple for players to interact with each feature.
3. **Rounded, Gradient Buttons:**
   1. The game features rounded buttons that give the interface a modern, clean look. These buttons are interactive, with hover effects that make them more intuitive to use. The gradient effect on the buttons adds depth and visual interest, making them pop on the screen.
   2. The use of bright colors on buttons ensures they stand out against the background, making them easy to find

**Conclusion:**

The Color Hunt game offers a fun, relaxing, and fast-paced experience for players of all skill levels. With two engaging game modes (Classic and Challenge), players can test their ability to match color names with the displayed color. The absence of a lives system and the lack of level unlocking ensure that players can continuously play without pressure, focusing solely on improving their score. The game is highly customizable, allowing managers to adjust the difficulty, modify content, and control sound elements, making it a dynamic and ever-evolving experience. Color Hunt is an ideal game for players who enjoy challenges, competition, and a simple yet addictive gameplay loop.