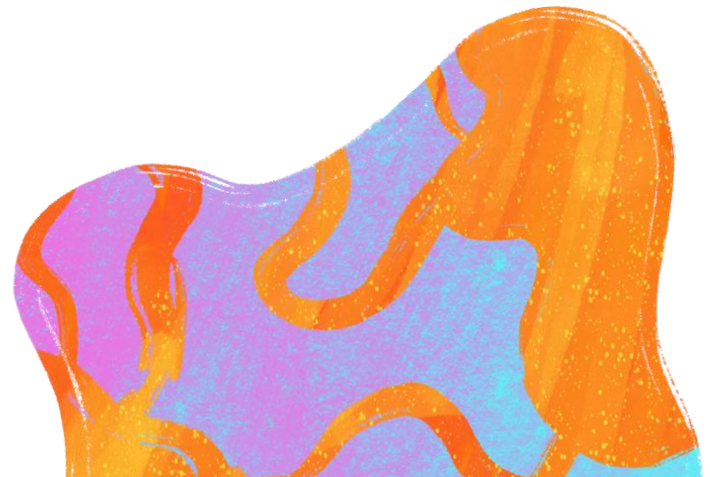
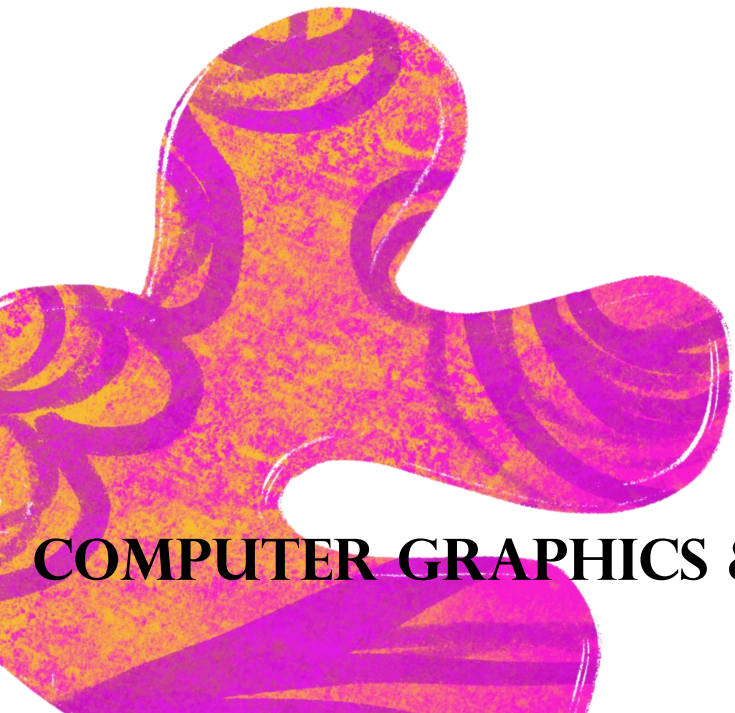




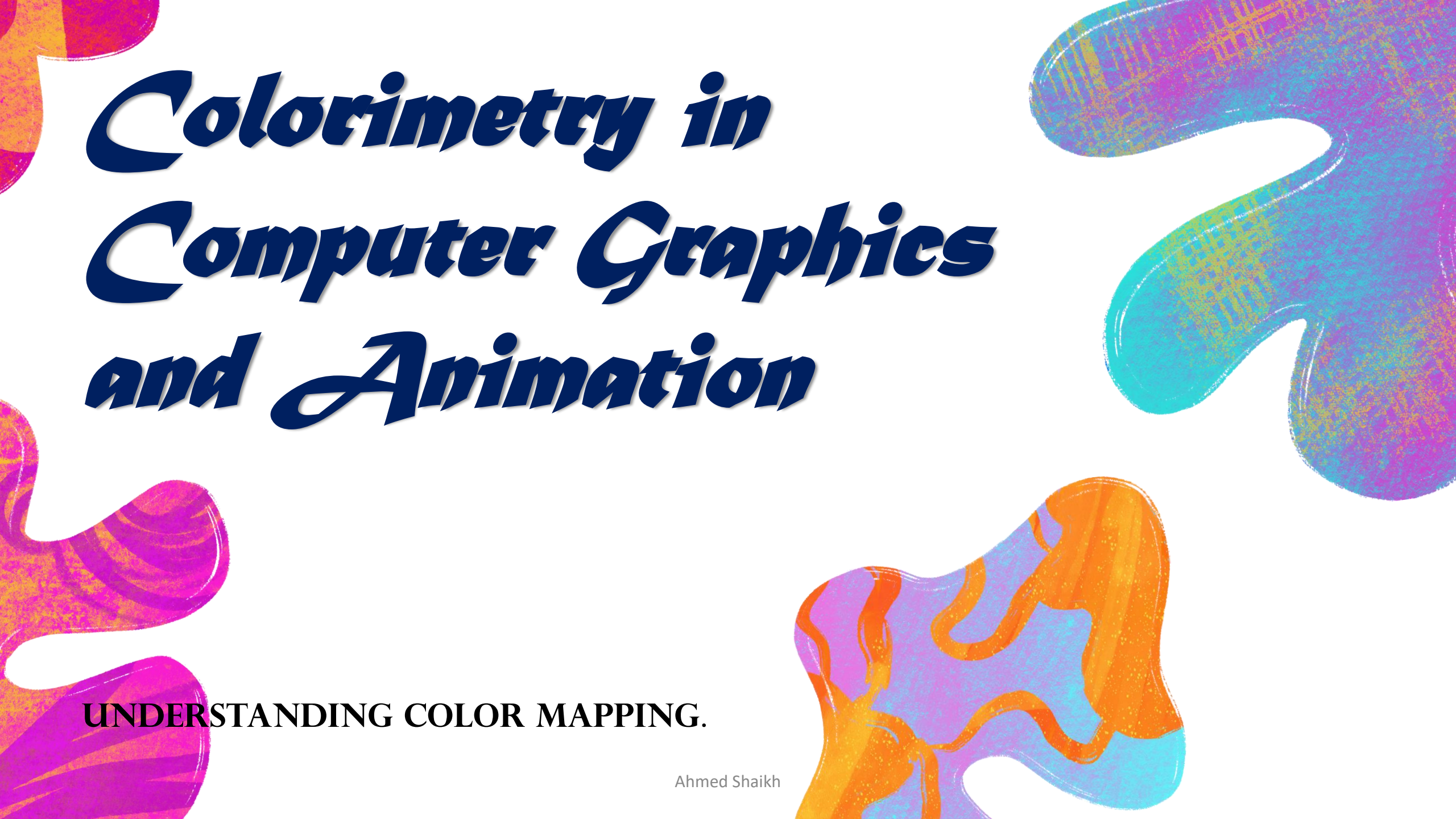
Ahmed Shaikh

SYIT – 232

Incharge: Prof. Priya Maurya



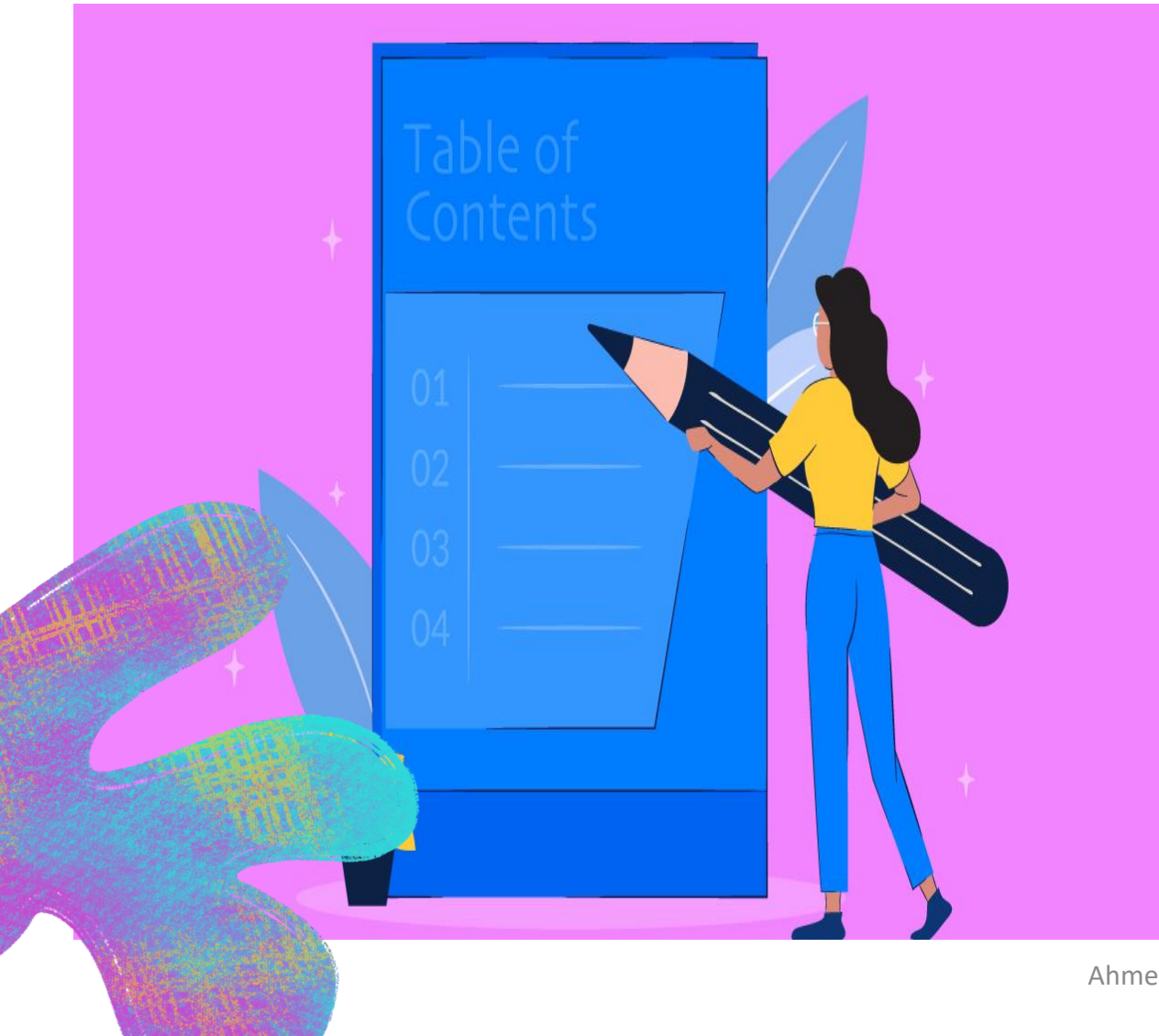
COMPUTER GRAPHICS & ANIMATION

The slide features four abstract, organic shapes in the corners. Top-left: A shape with orange and red segments. Top-right: A large shape with a blue and purple plaid pattern. Bottom-left: A shape with pink and purple wavy patterns. Bottom-right: A shape with orange, pink, and blue wavy patterns.

Colorimetry in Computer Graphics and Animation

UNDERSTANDING COLOR MAPPING.

TABLE CONTENT



- ❖ *INTRODUCTION*
- ❖ PRIMARY COLOR
- ❖ RGB COLOR
- ❖ APPLICATION OF COLORIMETRY

1. INTRODUCTION

❖ What is Colorimetry?

- Colorimetry in computer graphics is a field that deals with the measurement and representation of colors. It's all about how we can describe and reproduce colors accurately in digital images and displays.
- Colorimetry is a fundamental concept in display test and measurement. It involves the measurement and analysis of color perception and reproduction. The human eye can detect millions of colors and shades, and colorimetry is used to ensure that displays accurately reproduce these colors.
- A colorimeter is a device that is used in Colorimetry. It refers to a device which helps specific solutions to absorb a particular wavelength of light. The colorimeter is usually used to measure the concentration of a known solute in a given solution

2. RGB COLOR

- The RGB color model is one of the most widely used color representation method in computer graphics. It use a color coordinate system with three primary colors

Red

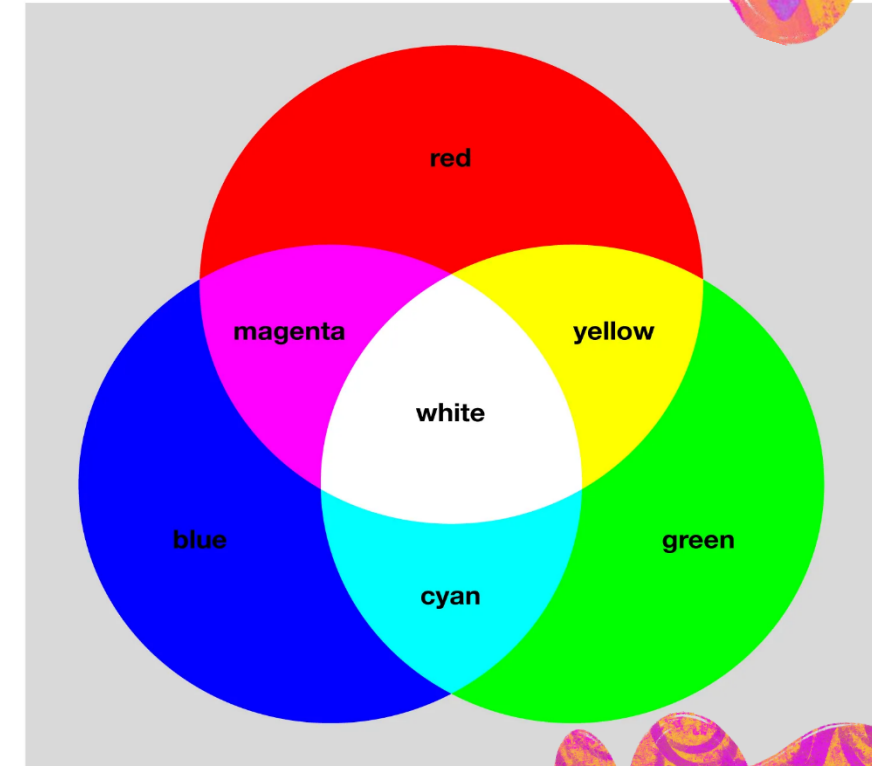
Green

Blue

- The main purpose of the RGB color model is for the sensing, representation, and display of images in electronic systems, such as televisions and computers

- RGB Color is also known as **Primary Color**

RGB colour model



RGB Color

- We can specify the **Red**, **Green**, and **Blue** components as integers ranging from **0** to **255**.

Red Green Blue
↓ ↓ ↓
`rgb(0, 0, 0)`
`rgb(255,255,255)`
`rgb(0,0,255)`
`rgb(0,255,0)`
`rgb(255,0,0)`



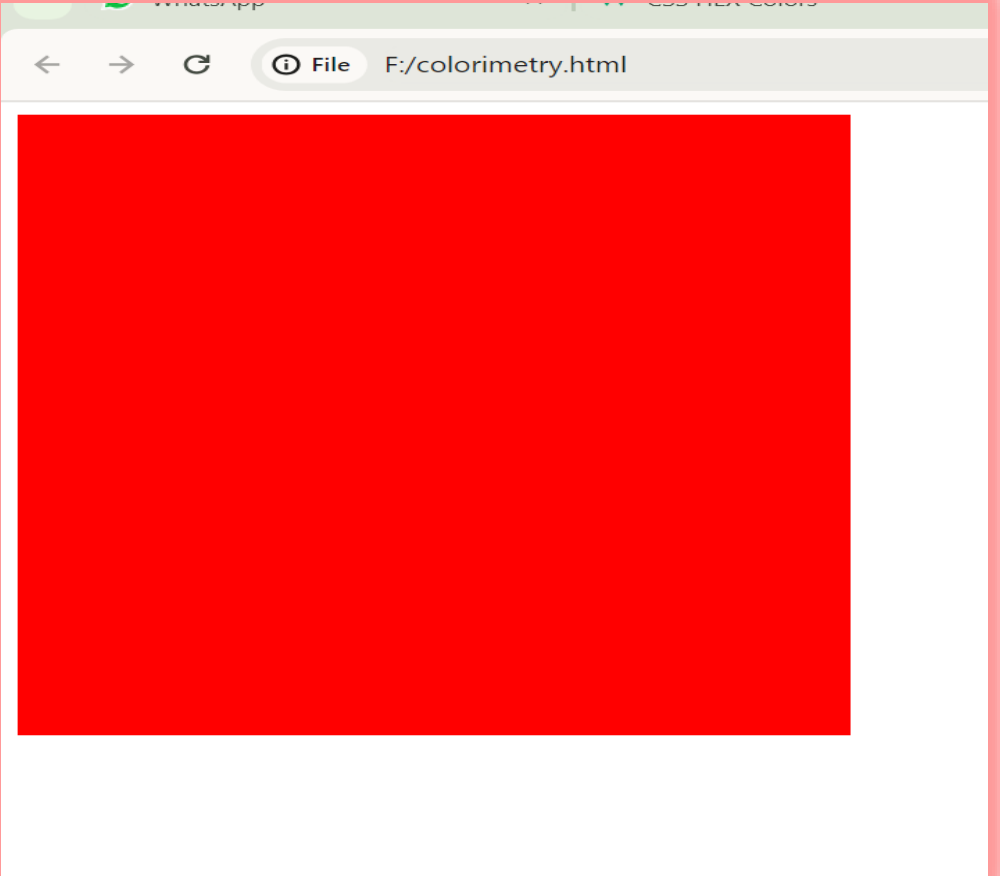
RGB IN CSS

colorimetry - Notepad

File Edit View

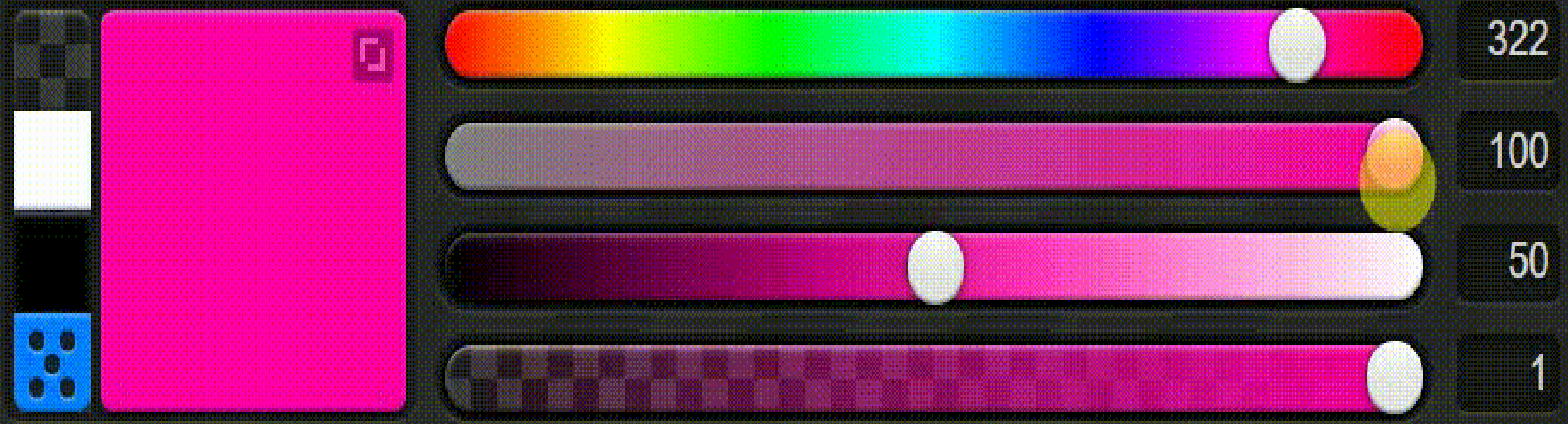
```
<html>
<head>
<title> colorimetry</title>
<style>
    div{
        height:400px;
        width:400px;
        background-color:rgb(255,0,0);
    }
</style>
</head>
<body>
<div>
</div>
</body>
</html>
```

INPUT



OUTPUT

COLOR FORMATS IN CSS



`#ff00a1`

`rgba(255, 0, 161, 1)`

`hsla(322, 100%, 50%, 1)`

APPLICATIONS OF COLORIMETRY

The science of colorimetry is used to quantify the response of the human visual system and match human color perception for applications in a variety of industries.

Display Manufacturing:

Quality control for industrial production lines and incoming inspection of display glass. Display calibration for LED, LCD, plasma, projection, DLP, CRT and LCOS displays.

Broadcasting:

Measuring and calibrating video walls for color accuracy, uniformity of brightness and white balance.

Graphic Design and Computer Animation:

Professionals who rely on color accuracy and precision color measurement benefit from understanding colorimetry





THANK YOU