**Guess the Color!**

1. Generate RGB color using matplotlib.colors

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| 1. import matplotlib.colors as mcolors 2. print(mcolors.CSS4\_COLORS) |

Output:

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| {'aliceblue': '#F0F8FF', 'antiquewhite': '#FAEBD7', 'aqua': '#00FFFF', 'aquamarine': '#7FFFD4', 'azure': '#F0FFFF', 'beige': '#F5F5DC', 'bisque': '#FFE4C4', 'black': '#000000', 'blanchedalmond': '#FFEBCD', 'blue': '#0000FF', 'blueviolet': '#8A2BE2', 'brown': '#A52A2A', 'burlywood': '#DEB887', 'cadetblue': '#5F9EA0', 'chartreuse': '#7FFF00', 'chocolate': '#D2691E', 'coral': '#FF7F50', 'cornflowerblue': '#6495ED', 'cornsilk': '#FFF8DC', 'crimson': '#DC143C', 'cyan': '#00FFFF', 'darkblue': '#00008B', 'darkcyan': '#008B8B', 'darkgoldenrod': '#B8860B', 'darkgray': '#A9A9A9', 'darkgreen': '#006400', 'darkgrey': '#A9A9A9', 'darkkhaki': '#BDB76B', 'darkmagenta': '#8B008B', 'darkolivegreen': '#556B2F', 'darkorange': '#FF8C00', 'darkorchid': '#9932CC', 'darkred': '#8B0000', 'darksalmon': '#E9967A', 'darkseagreen': '#8FBC8F', 'darkslateblue': '#483D8B', 'darkslategray': '#2F4F4F', 'darkslategrey': '#2F4F4F', 'darkturquoise': '#00CED1', 'darkviolet': '#9400D3', 'deeppink': '#FF1493', 'deepskyblue': '#00BFFF', 'dimgray': '#696969', 'dimgrey': '#696969', 'dodgerblue': '#1E90FF', 'firebrick': '#B22222', 'floralwhite': '#FFFAF0', 'forestgreen': '#228B22', 'fuchsia': '#FF00FF', 'gainsboro': '#DCDCDC', 'ghostwhite': '#F8F8FF', 'gold': '#FFD700', 'goldenrod': '#DAA520', 'gray': '#808080', 'green': '#008000', 'greenyellow': '#ADFF2F', 'grey': '#808080', 'honeydew': '#F0FFF0', 'hotpink': '#FF69B4', 'indianred': '#CD5C5C', 'indigo': '#4B0082', 'ivory': '#FFFFF0', 'khaki': '#F0E68C', 'lavender': '#E6E6FA', 'lavenderblush': '#FFF0F5', 'lawngreen': '#7CFC00', 'lemonchiffon': '#FFFACD', 'lightblue': '#ADD8E6', 'lightcoral': '#F08080', 'lightcyan': '#E0FFFF', 'lightgoldenrodyellow': '#FAFAD2', 'lightgray': '#D3D3D3', 'lightgreen': '#90EE90', 'lightgrey': '#D3D3D3', 'lightpink': '#FFB6C1', 'lightsalmon': '#FFA07A', 'lightseagreen': '#20B2AA', 'lightskyblue': '#87CEFA', 'lightslategray': '#778899', 'lightslategrey': '#778899', 'lightsteelblue': '#B0C4DE', 'lightyellow': '#FFFFE0', 'lime': '#00FF00', 'limegreen': '#32CD32', 'linen': '#FAF0E6', 'magenta': '#FF00FF', 'maroon': '#800000', 'mediumaquamarine': '#66CDAA', 'mediumblue': '#0000CD', 'mediumorchid': '#BA55D3', 'mediumpurple': '#9370DB', 'mediumseagreen': '#3CB371', 'mediumslateblue': '#7B68EE', 'mediumspringgreen': '#00FA9A', 'mediumturquoise': '#48D1CC', 'mediumvioletred': '#C71585', 'midnightblue': '#191970', 'mintcream': '#F5FFFA', 'mistyrose': '#FFE4E1', 'moccasin': '#FFE4B5', 'navajowhite': '#FFDEAD', 'navy': '#000080', 'oldlace': '#FDF5E6', 'olive': '#808000', 'olivedrab': '#6B8E23', 'orange': '#FFA500', 'orangered': '#FF4500', 'orchid': '#DA70D6', 'palegoldenrod': '#EEE8AA', 'palegreen': '#98FB98', 'paleturquoise': '#AFEEEE', 'palevioletred': '#DB7093', 'papayawhip': '#FFEFD5', 'peachpuff': '#FFDAB9', 'peru': '#CD853F', 'pink': '#FFC0CB', 'plum': '#DDA0DD', 'powderblue': '#B0E0E6', 'purple': '#800080', 'rebeccapurple': '#663399', 'red': '#FF0000', 'rosybrown': '#BC8F8F', 'royalblue': '#4169E1', 'saddlebrown': '#8B4513', 'salmon': '#FA8072', 'sandybrown': '#F4A460', 'seagreen': '#2E8B57', 'seashell': '#FFF5EE', 'sienna': '#A0522D', 'silver': '#C0C0C0', 'skyblue': '#87CEEB', 'slateblue': '#6A5ACD', 'slategray': '#708090', 'slategrey': '#708090', 'snow': '#FFFAFA', 'springgreen': '#00FF7F', 'steelblue': '#4682B4', 'tan': '#D2B48C', 'teal': '#008080', 'thistle': '#D8BFD8', 'tomato': '#FF6347', 'turquoise': '#40E0D0', 'violet': '#EE82EE', 'wheat': '#F5DEB3', 'white': '#FFFFFF', 'whitesmoke': '#F5F5F5', 'yellow': '#FFFF00', 'yellowgreen': '#9ACD32'} |

1. Construct an WAVl tree using the color names
2. The game is as follows:

The player is given a jumbled suit of letters (from one or more colors in the list of colors). The player then has to make a color from the suit of letters. Each time the player enters a possible color (players attempt) the color is checked against the possible colors using the WAVL tree. Each time a correct color is identified add points to the player score and delete the color from WAVL tree so the player cannot enter the same color twice.

The game is divided into levels where at each increasing level the size of the suit of letters given to the player increases. Each level ends when the player can no longer make a color from the letters remaining.

1. Make a front end using pygame.