Using the Binary Search Algorithm and trace table examples at the end of this document, complete the trace tables below for the Color Array. Upload this document to github and submit the link to your repository to the dropbox.

1st search: violet [9] - Return True

|  |  |  |  |
| --- | --- | --- | --- |
| **First** | **Last** | **Middle** | **Comparison** |
| 0 | 10 | 5 | Violet > Indigo |
| 6 | 10 | 8 | Violet < Red |
| 9 | 10 | 9 | Violet = Violet |
|  |  |  |  |
|  |  |  |  |

2nd search: green [4] - Return True

|  |  |  |  |
| --- | --- | --- | --- |
| **First** | **Last** | **Middle** | **Comparison** |
| 0 | 10 | 5 | Green < Indigo |
| 0 | 4 | 2 | Green > Chartreuse |
| 2 | 4 | 3 | Green > Dark Brown |
| 3 | 4 | 3 | Green > Dark Brown |
| 4 | 4 | 4 | Green = Green |

3rd search: yellow [10] – Return True

|  |  |  |  |
| --- | --- | --- | --- |
| **First** | **Last** | **Middle** | **Comparison** |
| 0 | 10 | 5 | Yellow > Indigo |
| 6 | 10 | 8 | Yellow > Red |
| 8 | 10 | 9 | Yellow > Violet |
| 9 | 10 | 9 | Yellow > Violet |
| 10 | 10 | 10 | Yellow = Yellow |

**Color array**:

|  |  |
| --- | --- |
| aqua | [0] |
| brown | [1] |
| chartreuse | [2] |
| dark brown | [3] |
| green | [4] |
| indigo | [5] |
| lavender | [6] |
| magenta | [7] |
| red | [8] |
| violet | [9] |
| yellow | [10] |

A white background with black text

Description automatically generated

Above: Binary Search Algorithm

A screenshot of a computer

Description automatically generated