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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

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

2nd search: green

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

3rd search: yellow

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

**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] |

Text, application

Description automatically generated

Above: Binary Search Algorithm