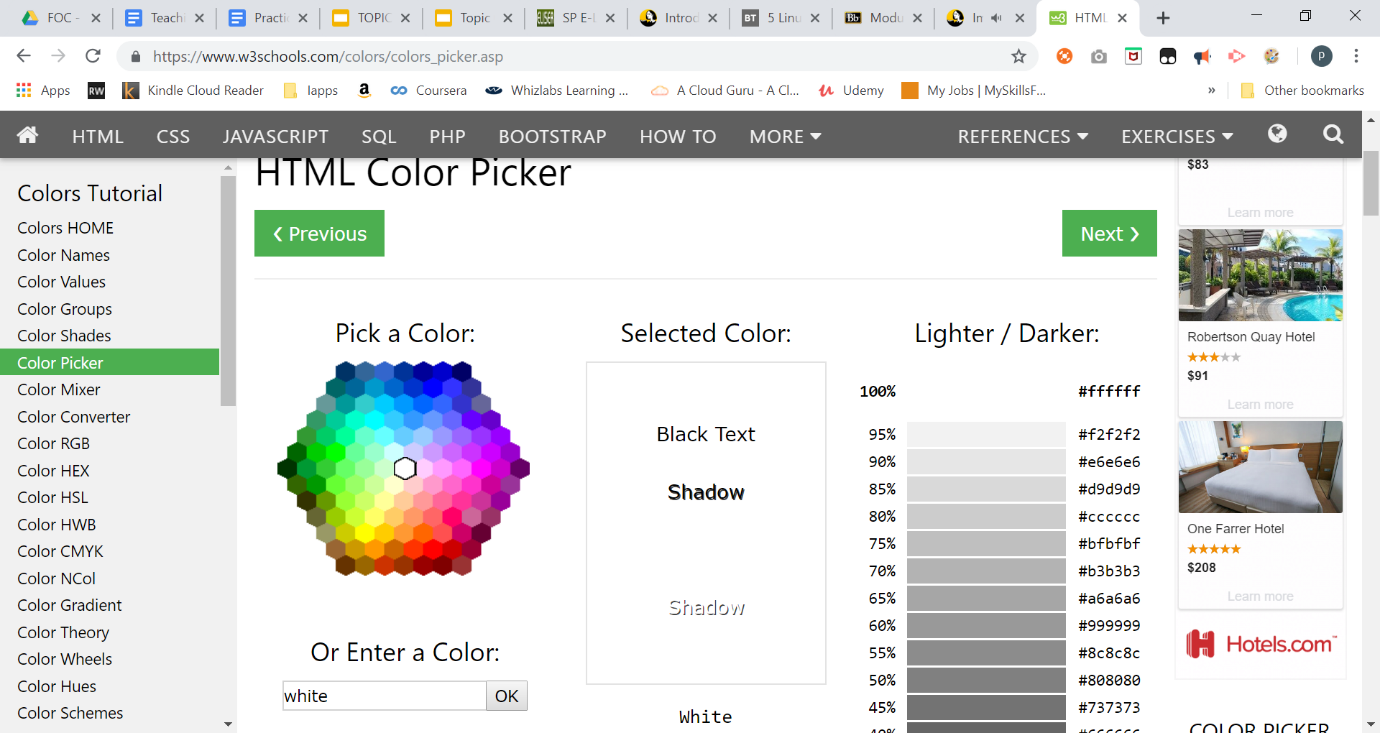
**Practical 04 Digital Presentation**

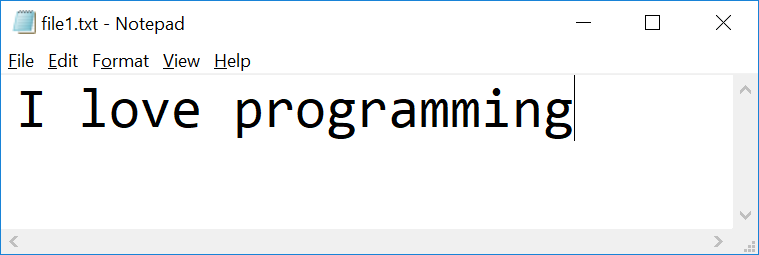
**Representing colour in RGB**

1. ******Go to web site <https://www.w3schools.com/colors/colors_picker.asp>

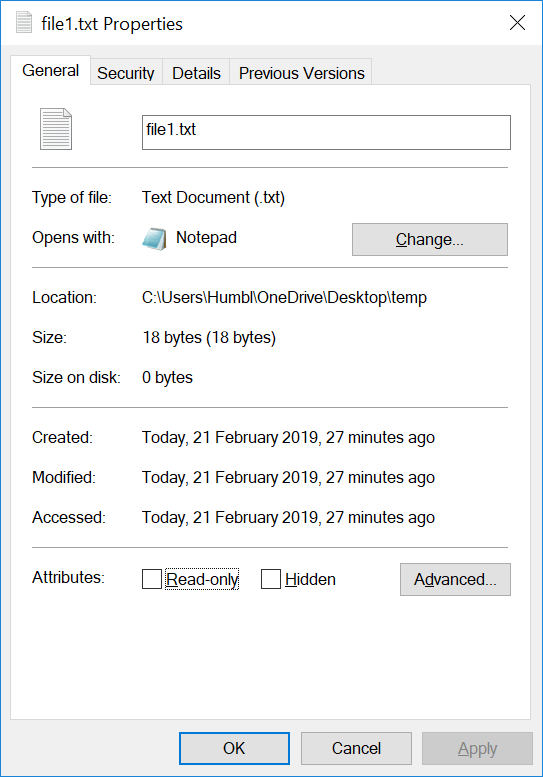
|  |  |  |
| --- | --- | --- |
| **Colour** | **RGB in decimal** | **RGB In Hex** |
| Black | 0, 0, 0 | **#000000** |
| White | 255, 255, 255 | **#ffffff** |
| Maroon | 128, 0, 0 | **#800000** |

Access the File Header

1. Using notepad, create a text file named “file1.txt”



1. Check the file properties



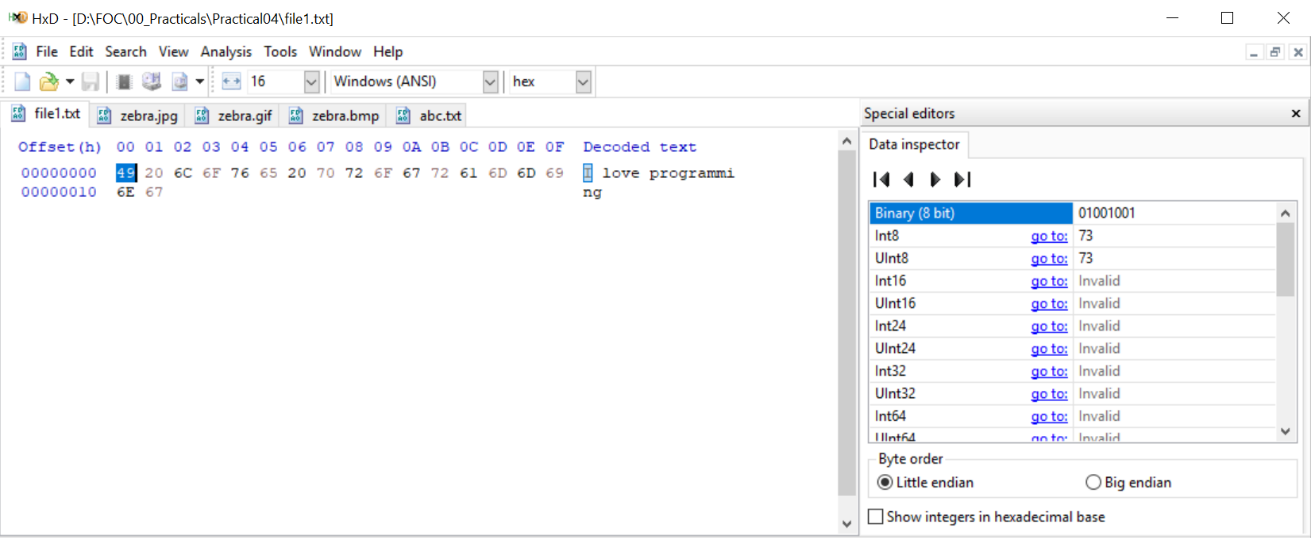
What is the size of the file in bytes?

|  |
| --- |
| 18 bytes |

1. Visit HexEd at <https://hexed.it/>

or download HxD Hex Editor

<https://download.cnet.com/HxD-Hex-Editor/3000-2352-10891068.html?part=dl-HxDHexEdi&subj=uo&tag=button>

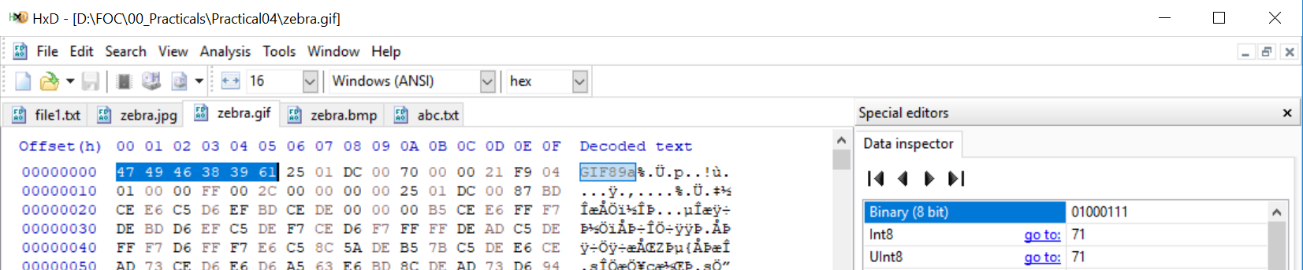
1. Open file1.txt using HxD
2. Observe the Hex code  
   

|  |  |  |
| --- | --- | --- |
| **Character** | **Hex** | **Binary(8 bit)** |
| I | 49 | 01001001 |

1. Using HxD to observe how character “o” and space character are represented

|  |  |  |
| --- | --- | --- |
| **Character** | **Hex** | **Binary(8 bit)** |
| o | 6F | 01101111 |
| space |  | 01001001 |

1. Download the following image and save it as zebra.**jpg**, zebra.**gif** and zebra.**bmp**
2. Open **zebra.gif** in HxD

Observe the Hex code

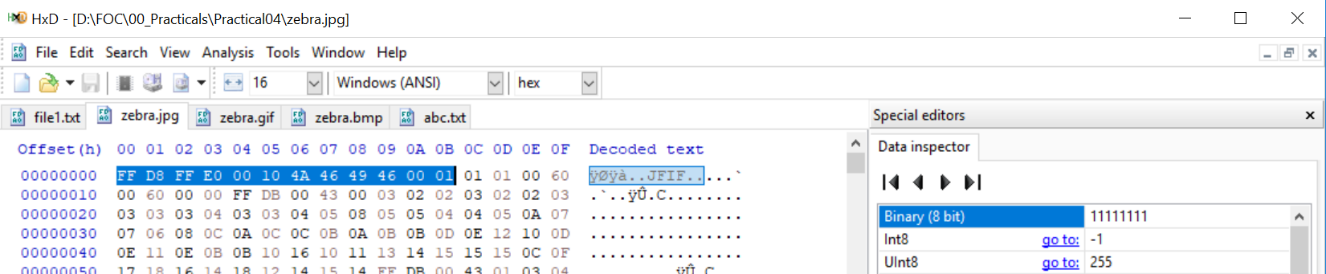
What are the **first 6 bytes** decoded?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **offset** | **00** | **01** | **02** | **03** | **04** | **05** |
| Byte | 01000111 | 01001001 | 01000110 | 00111000 | 00111001 | 01100001 |
| Character | 47 | 49 | 46 | 38 | 39 | 61 |

1. Visit web site <https://en.wikipedia.org/wiki/List_of_file_signatures> to find out the meaning of above hex code

|  |
| --- |
| Image file encoded in the Graphics Interchange Format (GIF) |

1. Open **zebra.jpg** in HxD  
     
   Observe the Hex code



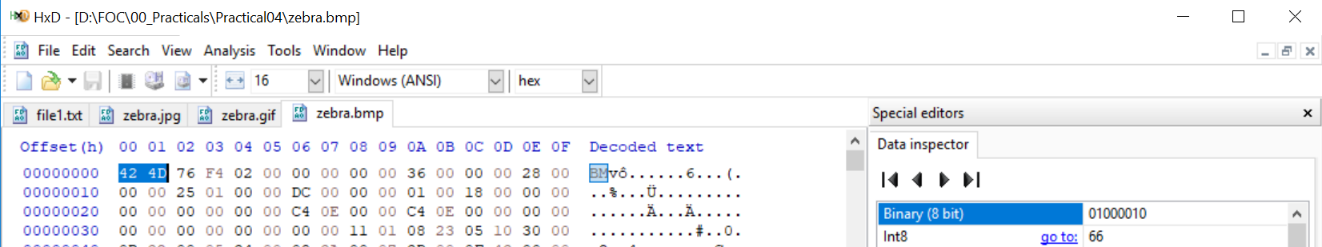
What are the **first 12 bytes**?

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **offset** | **00** | **01** | **02** | **03** | **04** | **05** | **06** | **07** | **08** | **09** | **0A** | **0B** |
| Byte | 11111111 | 11011000 | 11111111 | 11100000 | 00000000 | 00010000 | 01100000 | 00000000 | 01100000 | 00000000 | 00000000 | 11011011 |
| Character | FF | D8 | FF | E0 | 00 | 10 | 4A | 00 | 60 | 00 | 00 | DB |

1. Visit web site <https://en.wikipedia.org/wiki/List_of_file_signatures> to find out the meaning of above hex code

|  |
| --- |
| JPEG raw or in the JFIF or Exif file format |

1. Open **zebra.bmp** in hex editor

Observe the Hex code   


What are the **first 2 bytes**?

|  |  |  |
| --- | --- | --- |
| **offset** | **00** | **01** |
| Byte | 01000010 | 01001101 |
| Character | 42 | 4D |

1. Visit web site <https://en.wikipedia.org/wiki/List_of_file_signatures> to find out the meaning of above hex code

|  |
| --- |
| BMP file, a bitmap format used mostly in the Windows world |

1. (optional)  
   Download the file at <https://drive.google.com/open?id=1vf0SBkI1LdWQvYmK9yM5AyJ0fHKE6DHR>

How can you view it as an image?

|  |
| --- |
| Rename it as a jpg and save it as all files |

**Hint:**

* Open the file using HxD
* Visit web site <https://en.wikipedia.org/wiki/List_of_file_signatures> to find out the meaning of above hex code
* Rename the extension of the file

*End of Practical*