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| **Group No:** 27  **Group Member:**   1. Waranthorn Chansawang 2. Anik Romyanon 3. Ittipat Yodprasit |

# Part 0: Preparation

* Download “Activity 1 Resources” from CourseVille.
* In Part 2, each group is assigned to work with the files: [YOUR\_GROUP\_NO].bmp, and [YOUR\_GROUP\_NO].gif in “02 Pic” folder
* Answer the questions in the box given and submit this file (.docx format) to CourseVille.

# Part 2 : Image Representation

## BMP Image Representation

(Use the file name: [YOUR\_GROUP\_NO].bmp in “02 Pic” folder)

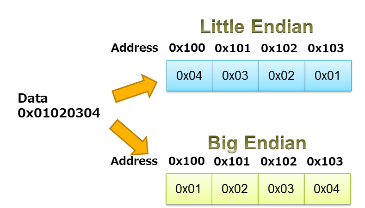
1. Use “File Explorer” to observe the file
   * What is the file size (in bytes)?

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| 822 bytes |

* + Write the file size using a 2-byte Hexadecimal Notation.

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| 03 36 |

1. Open the BMP file assigned to your group in HexEdit
   * Under the “Template” menu item, apply the template you think will help you analyze the BMP file format.
   * By observing the Hex content of the file, explain at least 2 ways to know the size of the file in bytes. Is the size similar to what can be seen from “File Explorer”? (Hint: file size showing with little endian byte order)



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| - Using bmp template -> Windows\_bitmap -> infohdr -> size to see the bytes containing the size data.  -Counting the total bytes in the Hex-Edit File |

* + What is the dimension of the image, and how can you find it in HexEdit?

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| -Using bmp template -> Windows\_bitmap -> infohdr then check width and height and convert to hexadecimal = 16 \* 16 |

* + What does the content at 01C - 01D represent?

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| Bitcount value |

* + Explain how is the color of a pixel encoded?

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| Using the Color-hex system, 3 bytes representing a specific color |

* + What is the RGB value (in hexadecimal) of the color used for the background in the image file?

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| FF00D2 |

* + What is the RGB value (in hexadecimal) of the color used for the outline of the shape in the image file?

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| FFFFFF |

1. Edit the Hex content of the file so that the shape is filled with a color of your choice that is different from the color of the outline and the color of the background.
   * Explain the steps you did in completing the filling.

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| Replace the background hex (FF00D2) with a green color hex(00FF4E) and replace white outline hex(FFFFFF) with black color hex(000000) |

* + Save the new image with different filename. Insert the image (both original and edited version) in this answer box.

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