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| **Group No:** 13  **Group Member:**   1. Surapee Suwan 2. Kanpasit Pothebungkarn 3. Vijak Khajornritdacha |

# 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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| 1.By counting the number of bytes in the file.  IAR Migration Techniques for Different Endianness2.By using bmp template in Hex Edit, we can navigate to the specified size of the file inside hex code. |

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

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| 16\*16 pixel. Can be found by navigating to width and height in bmp template. |

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

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| Bitcount |

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

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| RGB has 3 bytes with the first byte being blue, second being green, and third being red. |

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

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| 00 FF DE (Big Indian order) |

* + 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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| FF FF FF (Big Indian order) |

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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| Select the hex of the original colors and replace the particular hex code manually. |

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

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