**Lesson 4 – Swing: Files / Images**

* **JFileChooser**
  + Dialogue box used to allow the user to access files
  + **Two methods** determine whether the dialogue will be used to save or load files
    - *int showSaveDialogue(Component parent);*
    - *int showOpenDialogue(Component parent);*
  + **int showSaveDialogue(Component parent);**
    - **parent**
      * Parent Component that the JFileChooser is attached to
        + The dialogue will be opened on top of this
        + If this is a Frame the JFileChooser will react to commands given to the frame (minimize, close, etc)
        + Can be set to null which will make the JFileChooser independent
    - **int** 
      * Returns an integer representing the option selected
        + APPROVE\_OPTION (User chose a file)
        + CANCEL\_OPTION (User cancelled dialogue)
        + ERROR\_OPTION (Error occurred)
    - If the file was chosen you can get the File Object with getSelectedFile()
      * Returns the selected File
        + You can now perform File Operations
* **Images**
  + One way to work with images is to create an **ImageComponent that extends JComponent**
    - The image is loaded from a jpg, gif, or png file and stored as an ImageIcon Object
    - The actual picture can be accessed using the getImage() Method
    - It is displayed by overriding the paintComponent() Method and calling the drawImage() Method from the Graphics Class
  + **Animation using Images**
    - Another way to display animations is to create an array of a sequence of Image Files
      * + Use a Sleep() Method to slow it down
      * The image displayed is switched between array elements
      * The image swapping can be performed in a separate Thread