

## CIT-115: Tree structure analysis

Steps:

1. Acquire a flash disk with somebody else's file tree loaded onto it. Mount the disk onto the main computer's file system (usually done by just plugging it into the USB slot and waiting for Windows to auto-mount the drive)
2. Navigate into the root of the tree in Windows explorer AND the command line interface (called the Command Prompt in Windows)
3. Browse through the tree carefully, visiting each directory (called traversing). Diagram this tree as you go in the space below since we'll use the diagram to continue the exercise. You may visually connect nodes like a traditional tree diagram or find a more compact way to compute the requested values
4. Compute the following values and populate a single row in the table below (you'll analyze a few trees)

Tree author	Name of root directory	Total tree depth (number of generations below the root)	Total number of directory nodes	Total number of file nodes	Ratio of file nodes to directory nodes	Total space required to store tree contents on disk (run the dir command in the root directory and convert the byte value to Kilobytes)	Measurement of the tree's balance (e.g. count number of nodes on the left and right of the root)

5. Using our library of file trees located on [technologyrediscovery.net](http://technologyrediscovery.net), locate a related tree that another student has made. Download and visualize that tree using the tree program in the command prompt.
6. Choose a logical location on your file tree in which to graft the entire additional file tree from another student. Make a note of the mount point for this particular additional file tree. Write below which tree you grafted in to your own, and where (for example, you might write: *grafted in the tree named 'hockey' to \sports\winter\ice in my own tree*)
  
7. Visualize your graft using the tree program in the command prompt; copy and paste your tree diagram into a word processor for printing. Print it out and annotate the relationship between your tree and the grafted tree.
8. Upload your entire flash disk's directory to our shared drive of student-made file trees located on [technologyrediscovery.net](http://technologyrediscovery.net)