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CPSC 3220-001

**Project 1**

1. Please provide command-line code and full-sentence English interpretation of the results for the following:
   1. Identify 4 image file formats and 4 source code formats present within fs1.zip and fs2.zip.
      1. *Explanation:* I started out by running the command **grep -r -E ‘\*\.jpg$|\*\.JPG$’ . | wc -l** to see if there were any .jpg files. *grep* looks for the pattern ‘.jpg’ through all files, and *wc -l* prints the number of occurrences found by *grep* to the screen. The -r flag for *grep* tells it to search recursively and the -E flag allowed me to extend the regular expression to search for .jpg and .JPG at the same time. I did this because technically they are the same file extension, but *grep* will count them as different if you don’t specify. The regular expression is written to match any lines where .jpg is at the end of the line. There were some .jpg files, so I basically just continued to run this command in a trial-and-error approach, trying different image file extensions to see if any existed. Then I used the same method to identify some source code file extensions.
      2. *fs1*
         1. Image: .jpg, .ppm, .gif, .tiff
         2. Source: .c, .cpp, .html, .java
      3. *fs2*:
         1. Image:
         2. Source:
   2. How many files appear cumulatively? How many were from 1990-1995? How many from pre-1990?
      1. *fs1*: There are 5334 .jpg, 145 .ppm, 27446 .gif, 3297 .tiff, 30430 .c, 338 .cpp, 6914 .html, and 707 .java. This gives us a total of 74611 files.
      2. *fs2*: