2. My code is not nearly as efficient as it could be. For one I output all the linkage and page links instead of only 75, this was mostly for debugging. Otherwise it follows the algorithm provided to us with the exception of the accumulator. The accumulator keeps a running sum for all pages with no link, allowing for significantly less travelersals and a significantly lower running time. I also use a significant amount of iterators rather than for each loops. This is mostly due to the fact that I am more familiar with iterators than for each loops and they accomplish the same things.
3.I use a large amount of libraries, however all of them are for file input or data structures. The main one used are java maps to store all of the adjacency lists. There are also quite a few libraries in order to access the files. Finally there are two libraries to allow for comparison and allow for the map to be sorted.

```
import static java.util.Map.Entry.comparingByValue;
import static java.util.Comparator.comparingInt;
import java.io.BufferedReader;
import java.io.BufferedWriter;
import java.io.FileInputStream;
import java.io.FileWriter;
import java.io.InputStreamReader;
import java.nio.file.Path;
import java.nio.file.Paths;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.HashSet;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import java.util.Set;
import java.util.Map.Entry;
import java.util.stream.Stream;
import java.util.zip.GZIPInputStream;
```

4. There are many similarities, but there are also some differences. The difference can come from different weights of the links. A page linked by a page with a very low page rank is going to increase significantly less than a page with a high page rank.
5. Random scores may cause it to not converge at all, while zeros will cause it to converge slower. Random scores will cause the page rank values to be completely different, and may not converge if the values are random each iteration. As the randomness will cause it to not converge. Zeros will cause more iterations to get the values to reset.