*********************** **WebCrawler.Java** *************************

```java
package cu.cs.cpsc215.project1;

import java.io.File;
import java.io.IOException;
import java.net.MalformedURLException;
import java.net.URL;
import java.net.URLConnection;

/**
 * WebCrawler
 * Classes Required:
 *         WebElement interface
 *         WebCrawler class, The Working Class
 *         WebPage class, impl WebElement
 *         WebFile class, impl WebElement
 *         WebImage class, impl WebElement
 *         DownloadRepository interface
 *         Repository, impl DownloadRepository (Singleton class)
 *
 * WebCrawler:
 *         Main Driver In Program - Take in only 3 arguments from command line
 *                 <URL>, <Depth of crawl>, <Save Directory Loc>
 *
 *         Uses of each given Param:
 *         <ULR> -> save to string -> Param for, WebPage(StringOfULR)
 *         <Depth> -> save to int -> Objective, crawl into pages of set depth
 *                                 Find uses when developing:
 *                                 Max crawl depth first?
 *                                 recursion?
 *                                 Loop with <Depth> as Param?
 *         <Dir Loc> -> save to string -> Main Directory for saving
 *                                 Will create a Files and Images folder.
 *
 * Personal Notes:
 *                 The save directory needs to already exist or you will get an error.
 *                 This project was especially hard, because of my unfamiliarity with
 * Java, Jsoup, HTML...
 *                 but I feel like I produced something that actually "fitts" the
 * requirements
 *                 I want to improve this, so future implementations may include my
 * first version,
 *                         which I attempted to make my own parser.
 *
 *                 in all, I hope this works...
```

```java
 *
 * @author cfitt
 *
 */

public class WebCrawler {

        private static String url;
        private static int depthCrawl;
        private static String savePath;

        public static void main(String[] args) throws IOException{//Check If number
of arguments is correct
    if(args.length != 3) {
            System.err.println("Please Submit args in format: <URL> <int
DepthofCrawl> <Save Directory>");
            return;
    } else {

                try {
                        url = args[0];
                        URL testUrl = new URL(url);
                        URLConnection urlConnection = testUrl.openConnection();
                        urlConnection.connect();
                } catch (MalformedURLException e) {
                        System.err.println("Not a valid URL");
            return;
        } catch (IOException e) {
            System.err.println("Could not open URL");
            return;
        }
//-------------------------------------------------------------------------
                try {
                        depthCrawl = Integer.parseInt(args[1]);
        } catch (NumberFormatException e) {
            System.err.println("Argument is not of int type");
            System.err.println("Please Submit args in format: <URL> <int
DepthofCrawl> <Save Directory>");
            return;
        }
//-------------------------------------------------------------------------
                savePath = args[2];
        File path = new File(savePath);
        if(!path.exists()) {
            System.err.println("File Path Invalid");
```

```java
                System.err.println("Please specify of ammend the File Path within
arguments");
                System.err.println("Please Submit args in format: <URL> <int
DepthofCrawl> <Save Directory>");
            return;
        }
//--------------------------------------------------------------------------
    System.out.println("Attempting to Crawl on " + url);
                WebPage initPage = new WebPage(url);
                initPage.crawl(depthCrawl);
                try {
                        DownloadRepository.getInstance().download(savePath);
                } catch (IOException e) {
                        System.err.println("");
                }
    }
    System.out.println("Finished Crawling");
        }
}
```