

# Cochrane Library Assessment

## Report

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### Problem Statement

To gather and store URLs and associated metadata from the Cochrane Library review collection (<https://www.cochranelibrary.com/cdsr/reviews/topics>).

Output Format:

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002204.pub4/full>  
| Allergy & intolerance | Antifungal therapies for allergic bronchopulmonary aspergillosis in people with cystic fibrosis | Heather E Elphick, Kevin W Southern | 2016-11-08

**URL -**

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002204.pub4/full>

**Topic -** Allergy & intolerance

**Title -** Antifungal therapies for allergic bronchopulmonary aspergillosis in people with cystic fibrosis **Author -** Heather E Elphick, Kevin W Southern **Date -** 2016-11-08

### Solution

For this assessment, I used java Jsoup library for web scrapping and maven to maintain the associated dependencies. I used the url provided to get the html of the web page and used Jsoup selector syntax to access the page's html elements by their class.

I created a class, 'VantageProject' in which I have defined one String function 'StringToDate(String inp\_date)' and one void function 'innerReviews(String url, String Topic, File myObj)'. The StringToDate() takes a string date as an argument and returns the desired formatted date. The innerReviews() takes the url of the page, Topic name, and the file which the output is to be written in and iterates over each review in the web page by accessing <div class="search-resultsitem-body"> to gather desired data and writes the generated result in the file passed as the argument.

```

11 public class VantageProject {
12
13     // Function to change the format of the date to desired format
14     public static String StringToDate(String inp_date) {
15         Hashtable<String, String> my_dict = new Hashtable<String, String>();
16         my_dict.put("January", "01");
17         my_dict.put("February", "02");
18         my_dict.put("March", "03");
19         my_dict.put("April", "04");
20         my_dict.put("May", "05");
21         my_dict.put("June", "06");
22         my_dict.put("July", "07");
23         my_dict.put("August", "08");
24         my_dict.put("September", "09");
25         my_dict.put("October", "10");
26         my_dict.put("November", "11");
27         my_dict.put("December", "12");
28
29         String[] splitDate = inp_date.trim().split("\\s+");
30         if (splitDate[0].length() == 1) {
31             splitDate[0] = "0" + splitDate[0];
32         }
33         String formatted_date = splitDate[2] + "-" + my_dict.get(splitDate[1]) + "-" + splitDate[0];
34
35         return formatted_date;
36     }
37
38     // Function to write each review info of each topic in a file
39     public static void innerReviews(String url, String Topic, File myObj) throws IOException {
40         Document inner_document = Jsoup.connect(url).get();
41
42         FileWriter myWriter = new FileWriter(myObj.getName(), true);
43
44         // iterating over each review
45         for (Element review : inner_document.select("div.search-results-item-body ")) {
46
47             Element reviewLink = review.select("a").first();
48
49             String reviewAuthor = review.select("div.search-result-authors div ").text();
50             String reviewDate = review.select("div.search-result-date div ").text();
51
52             String reviewHref = reviewLink.attr("href");
53             String reviewText = reviewLink.text();
54
55             // formatting and storing all the review info
56             String result = reviewHref + " | " + Topic + " | " + reviewText + " | " + reviewAuthor + " | "
57                 + StringToDate(reviewDate);
58
59             // writing the output in the text file
60             myWriter.write(result + "\n");
61             myWriter.write("\n");
62
63             // MetaData of the review
64             for (Element metaData : review.select("div.search-result-metadata-block")) {
65                 String metaType = metaData
66                     .select("div.search-result-metadata-item div.search-result-type div.custom-tooltip")
67                     .attr("aria-label");
68                 String metaStage = metaData
69                     .select("div.search-result-metadata-item div.search-result-stage div.custom-tooltip")
70                     .attr("aria-label");
71                 String metaDate = metaData.select("div.search-result-metadata-item div.search-result-date ").text();
72                 String meta = metaType + "\n" + metaStage + "\n" + metaDate;
73                 myWriter.write("MetaData:\n");
74                 myWriter.write(meta + "\n");
75             }
76         }
77         myWriter.close();
78     }
79 }
80
81

```

```

81
82 public static void main(String[] args) throws IOException, ParseException {
83
84     // creating a new text file
85     File myFile = new File("newFile.txt");
86
87     // checks if the file already exists else creates a new file
88     try {
89         if (myFile.createNewFile()) {
90             System.out.println("File created: " + myFile.getName());
91         } else {
92             System.out.println("File already exists.");
93         }
94     } catch (IOException e) {
95         System.out.println("An error occurred while creating the file.");
96         e.printStackTrace();
97     }
98
99     // url of the cochrane library topics page
100    String url = "https://www.cochranelibrary.com/cdsr/reviews/topics";
101    Document document = Jsoup.connect(url).get();
102
103    // iterating over each topic
104    for (Element link : document.select("div.span4 li.browse-by-list-item a")) {
105        String Topic = link.text();
106
107        // url for the cochrane library reviews page for the current topic
108        String linkHref = link.attr("href");
109
110        // getting and storing the content of reviews page for the current topic
111        Document current_document = Jsoup.connect(linkHref).get();
112
113        // calling the innerReviews function to get the desired output
114        innerReviews(linkHref, Topic, myFile);
115
116        // iterating over paginates of each review
117        for (Element nextPage : current_document.select("li.pagination-page-list-item ")) {
118            Element nextPageLink = nextPage.select("a").first();
119
120            // url for the paginated pages of the reviews page
121            String nextPageHref = nextPageLink.attr("href");
122
123            // System.out.println(nextPageHref);
124            // innerReviews(nextPageHref, Topic, myFile);
125
126        }
127    }
128
129 }
130
131 }
132

```

In the main function, I have used a for loop in line 104 to iterate over the topics provided in the (<https://www.cochranelibrary.com/cdsr/reviews/topics>) by selecting the <div class = "span4">. The second for loop in line 117 iterates over the paginates of the reviews pages of each topic and fetches the url for each paginated page which can be passed in to the 'innerReviews()'.

## Instructions

Command for entering the file location:

```
-cd ../../VantageProject/src/main/java/org/example
```

Command for compiling the java file into Bytecode:

```
-javac VantageProject.java
```

Command for running the program:

```
-java VantageProject
```

# Output

```
/cdsr/doi/10.1002/14651858.CD013327.pub2/full | Complementary & alternative medicine | Upper limb exercise for arteriovenous fistula maturation in people requiring permanent haemodialysis access | Sothide Nantakool,
Ishikawa Kenichiro, Shuajiao Zhang, Shuajiao Zhang, Shuajiao Zhang, Shuajiao Zhang | 2022-10-03
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
3 October 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD011968.pub4/full | Complementary & alternative medicine | Repetitive peripheral magnetic stimulation for impairment and disability in people after stroke | Tomohiko Kamo, Yoshitaka Wada,
Masatsugu Okamura, Kotomi Sakai, Ryo Momosaki, Shunsuke Taito | 2022-09-28
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
28 September 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD014638.pub2/full | Complementary & alternative medicine | Doxazosin for preventing or reducing cardiotoxicity in adults and children with cancer receiving anthracyclines | Esmeé C de
Bast, Renée L Mulder, Sary Armenian, Elizabeth AM Feijen, Heerick Grotenhuis, Melissa M Hudson, Annalisa MC Davido, Sirosthuis, Leonien OM Kremer, Elvira C van Dalen | 2022-09-27
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
27 September 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD013519.pub2/full | Complementary & alternative medicine | Acupuncture for treating overactive bladder in adults | Emma Hargreaves, Katherine Baker, Gill Barry, Christopher Harding,
Yingying Zhang, Ngienge-Bekwin Kandala, Xiaowen Zhang, Ashleigh Kernohan, Carl E Clarkson | 2022-09-23
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
23 September 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD001704.pub5/full | Complementary & alternative medicine | Interventions for improving mobility after hip fracture surgery in adults | Nicola J Fairhall, Suzanne M Dyer, Jenson CS Mah,
Joanna Diong, Wing S Kwok, Catherine Sherrington | 2022-09-07
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
7 September 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD013608.pub2/full | Complementary & alternative medicine | D-mannose for preventing and treating urinary tract infections | Tess E Cooper, Claris Teng, Martin Howell, Armando Teixeira-
Pinto, Allison Jure, Germaine Wong | 2022-08-30
MetaData:
A systematic review of studies assessing an intervention for a health problem.
A full review, complete with results and discussion, possibly including meta-analyses to combine results across studies.
30 August 2022
MetaData:

/cdsr/doi/10.1002/14651858.CD006895.pub4/full | Complementary & alternative medicine | Probiotics for preventing acute upper respiratory tract infections | Yunli Zhao, Bi Rong Dong, Qiluhui Hao | 2022-08-24
MetaData:
```