

Z534 Search

Assignment 3: Query-Centric PageRank

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Task 1: Rank the authors in scholarly database.

Solution: The java code for this task is stored in “**AuthorRank.java**”. Please store the “author.net” file in the Java working directory to run the code. The top 10 ranked authors and their respective PageRank values are -

```
990 -- "5284" -- 0.002048402122633822
1496 -- "875" -- 0.0019909498358929687
658 -- "654" -- 0.0017674856601102074
711 -- "595" -- 0.0016927104744134842
814 -- "16297" -- 0.001591362625031576
1628 -- "764" -- 0.0015095977786421155
556 -- "23770" -- 0.001390961674942178
383 -- "34659" -- 0.0013797659990105971
1948 -- "28421" -- 0.0013697497011617096
766 -- "31637" -- 0.0013438823539893513
```

Task 2: Rank the authors given a query.

Solution: The java code for this task is stored in “**AuthorRankwithQuery.java**”. Please store the “author.net” file in the Java working directory to run the code. Also the filepath for index is absolute in the program,

```
String index = "E:/Suhas(D-drive)/Suhas/IUB/3rd Sem/Search/Assignments/Assignment 3/assignment3/assignment3/author_index"
```

Please change it to your index location before running the code. The top 10 ranked authors and their respective PageRank values for query “data mining” and “information retrieval” are -

Query: data mining

```
814 -- "16297" -- 0.012910971795494292
747 -- "124894" -- 0.010771057229364068
749 -- "124896" -- 0.010771057229364068
810 -- "2430" -- 0.010319642712835433
746 -- "220154" -- 0.010151323534095182
748 -- "220153" -- 0.010151323534095182
809 -- "4836" -- 0.009823559198519191
1493 -- "4150" -- 0.009536933585245062
750 -- "124895" -- 0.009451013508889026
826 -- "380416" -- 0.008982939417589191
```

Query: information retrieval

```
35 -- "2841" -- 0.013423563322541788
814 -- "16297" -- 0.0124505167725752
```

1373 -- "4837" -- 0.011439033588660063
852 -- "71361" -- 0.010839320383633565
881 -- "225533" -- 0.010674422324974295
844 -- "16265" -- 0.010648970396542494
82 -- "171430" -- 0.010485770840067774
1416 -- "22658" -- 0.010354161802928473
1433 -- "30058" -- 0.010159742386061005
91 -- "16230" -- 0.010116586833092566