Homework Three

Most of the top pagerank pages are on insects. At first, this is bewildering — I certainly never associated the Dutch with insects — but it actually makes sense after some thought. Pagerank measures, in a sense, the degree to which pages are linked to from other pages. Due to Linnaeus' binomial nomenclature, pages on life forms tend to link to other pages about life forms (kingdoms link to phyla, phyla to orders, and so on). This causes the broad area of wiki pages on life forms to have a very high density of links. It turns out that beetles form the largest order in the animal kingdom. This means that lots and lots of pages link to the beetles page, either from the lower levels of classification (species, genus, etc) or the upper levels (kingdom, phyla, etc). Thus, it is no surprise that the page for beetles is highly ranked. Similarly, many of the other top pages on insects refer to very large groups within the Linnean system.

Here are the top ranking pages for 2 iterations and 10 iterations, respectively:

```
321.00128
                Mi.dden-Java
321.13452
                Chalcidoidea
322.5381
                Beenvissen
323.1978
                Brozilië
328.63797
                Stekelhuidigen
329.58615
                Laphotrocho
                 Indonesisch
339.3521
339.89572
                 Neopterygii
                Polen
342.6916
348.07254
                 Engels
353.99695
                Eenoogkreeftjes
359.45734
                Sponje
Onderfamilie
364.54678
366.28568
                Hymenoptera
Bladhaontjes
368.85892
373.2342
                 Schietmotten
382.50626
403.2085
485.84745
440.1448
                Parazoa
445.71768
                Noctualdea
463.0426
                Beervlinders
503.3538
517.5293
                 Itolië
544.11914
                Mieren
Malacostraca
579.1244
581.9313
                 Kreeftschtigen
592.8008
661.40436
                 Rechtvleugeligen
689.7467
                 België
709.7497
                 Schildwespen
822.194 Tweevleugeligen
831.2806
                 Sponners
846.13043
                 Søinnervillen
852.79987
                 Apocrita
925.52716
                Dipters
975.40906
1053.0732
                Duitsland
1146.7549
1185.2098
                 Indonesië
1377,2195
                Weekdieren
1402.296
1452.8418
                Boktorren
                Loopkevers
1511.918
                Frankrijk
2345.5686
                Geleedpotigen
2948.6162
                 Vliesvleugeligen
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```
206.72115
                Ennominae
209.18346
                Noord-Sumatra
                Tweekleppigen
210.39105
213.04651
                Maxillopoda
223.21669
                Sponje
225.97327
                Kniptorren
226.69673
                Nymphalidae
                Engeland
228.82565
230.53465
                Polen
232.35258
                Snuitmotten
233.76839
                Lycoenidae
243.26741
                Atjeh
253.7078
                Sikkelmotten
254.6005
                Trichoptera
258.01562
                Roofvliegen
258.9948
                Oost-Java
271.68266
                Straalvinnigen
277.21338
                Eulophidae
285.7205
                Itolië
290.6476
                Mi.dden-Java
                Blodhoontjes
335.02225
339.72116
                Eenoogkreeftjes
Bladrollers
343.2132
350.59366
                België
353.2658
                Beervlinders
353.67157
                Lamiinae
                Grasmotten
380.6047
427.52814
                Mieren
466,44998
                Eumetazoa
473.95798
                Slakken
501.53687
521.7227
                Rechtvleugeligen
535.4946
                Nederland
538.2799
                Malacostraca
542.2365
                Tweevleugeligen
605.9817
                Duitsland
                Schildwespen
Spinneruilen
703.4662
786.86884
793.2409
                Spanners
864.3758
                Frankrijk
882.1834
                Diptera
944,38153
                Indonesië
1155.1084
                Weekdieren
1265.2546
                Loopkevers
1270.7482
                Boktorren
1641.9781
                Geleedpotigen
2612.3796
                Vliesvleugeligen
2756.936
                Dierenrijk
2823.4177
hduser10ip-172-31-47-143:/usr/local/hadoop-2.7.1$ 🎚
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This information can be used to determine "central hubs" on the Wikipedia network. From this, one can draw conclusions about the topic areas that have the best Wikipedia coverage, for example. Another example (contrived, as long as Wikipedia keeps its word) would be determining ad pricing based on the wiki page the ad appears on; the higher the page rank of a page, the more value its ad space is.