

Output:

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number of nodes: 1000
Vertex 603: approximate page rank 0.00218
Vertex 596: approximate page rank 0.00215
Vertex 177: approximate page rank 0.00166
Vertex 540: approximate page rank 0.00146
Vertex 314: approximate page rank 0.00143
(base) ioshual Leeds@crc-dot1x-nat-10-239-60-65 DS210Homework10 %
Test - This tests if the total percentage of all the page ranks adds up to 1. Which it should do
warning: DS210Homework10 (bin "DS210Homework10" test) generated / warnings (run cargo fix --bin "
Finished test [unoptimized + debuginfo] target(s) in 0.49s
Running unittests src/main.rs (target/debug/deps/DS210Homework10-bcb8e7d8bcb4d657)

running 1 test
test tests ... ok

test result: ok. 1 passed; 0 failed; 0 ignored; 0 measured; 0 filtered out; finished in 12.71s

(base) ioshual Leeds@crc-dot1x-nat-10-239-60-65 DS210Homework10 % █
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This program simulates page rank by doing 100 random walks for each vertex 100 times. The steps function takes the current vertex and generates a random number to go to a new vertex. This is then run in the walks function 100 times for each vertex for a total of 100000 times it runs. Because of this to get the percentage of total times each vertex is landed on I divided by 100*1000. Together the walks and steps functions count the amount of times each vertex is visited when the program is run.