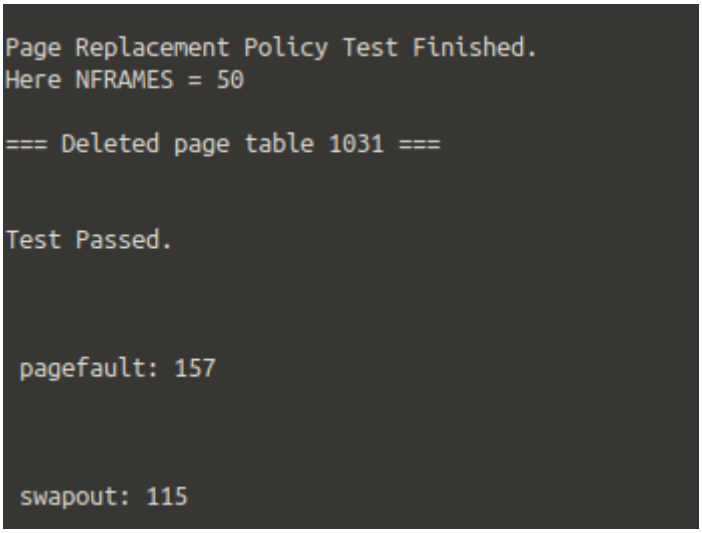
Lab3Answers

I implement the GCA policy in *gca_find_frame()* function (system/frame_bookkeeper.c). It retrieves the status bit, and goes through them to decide which frame to be evicted.

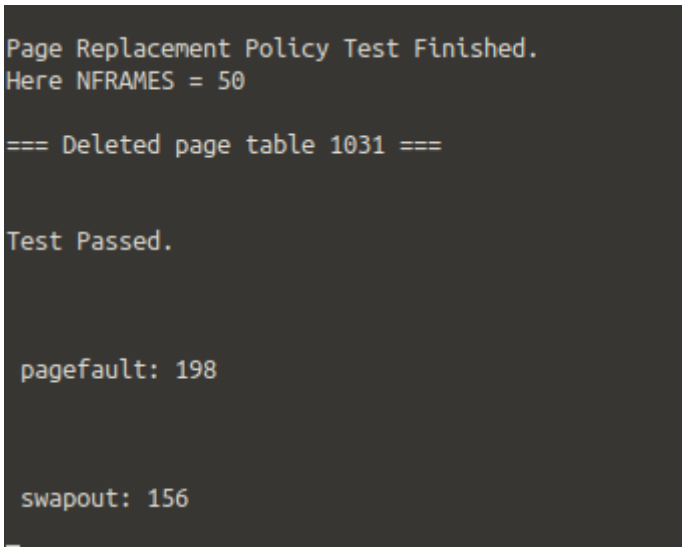
The testcase resides in my main.c, which calls page_policy_test(). We use *vcreate()* to create a process. It has *NFRAMES* = 50 and *HSIZE* = 100. And it writes to all the pages it has, then reads all of them. This testcase is general -- is not carefully crafted.

I tried FIFO and GCA for this testcase, and print out how many pagefaults it has. The outcome's screenshot are below:

GCA:



FIFO:



From above we can see that, for the same testcase:

- GCA has 157 pagefaults, and 115 swapout
- FIFO has 198 pagefaults. and 156 swapout

We can see that GCA has better performance than FIFO both in pagefault and swapout.