

CS 345 Lab3 Test cases

Test case 1: Pass 0 is sufficient (1 Point)

Input:

```
./a.out input1.txt 100 2 25
```

Output: <Blank screen Without segmentation fault>

Test case 2: Filling up initial Input buffers (1 Point)

Input:

```
./a.out input2.txt 16 3 4
```

Output:

```
Read page fault for R0_0 Page[0]
Read page fault for R0_0 Page[1]
Read page fault for R0_0 Page[2]
Read page fault for R0_0 Page[3]
Read page fault for R0_1 Page[0]
Read page fault for R0_1 Page[1]
Read page fault for R0_1 Page[2]
Read page fault for R0_1 Page[3]
Read page fault for R0_2 Page[0]
Read page fault for R0_2 Page[1]
Read page fault for R0_2 Page[2]
Read page fault for R0_2 Page[3]
...
```

Only first 12 lines of output would be evaluated for this test case. Rest of the lines would be ignored.

Test case 3: Writing temporary output (1 Point)

Input:

```
./a.out input2.txt 16 3 4
```

Output:

It will be evaluated whether there are 48 Write page faults printed in the output or not.

Test case 4: Frequency of “Read page fault for R0_0 Page[0] ” (1 Point)

Input:

```
./a.out input2.txt 16 3 4
```

Output:

It will be evaluated whether “Read page fault for R0_0 Page[0]” occurs four times in the output or not.

Test case 5: Number of passes (1 Point)

Input:

```
./a.out input3.txt 6 2 1
```

Output:

There should be 4000 lines in the output.

Pass Index	Sorted runs produced	Output lines generated
0	$\text{ceil}(1000/6) = 167$	0
1	$\text{ceil}(167/5) = 34$	1000
2	$\text{ceil}(34/5) = 7$	1000
3	$\text{ceil}(7/5) = 2$	1000
4	$\text{ceil}(2/5) = 1$	1000