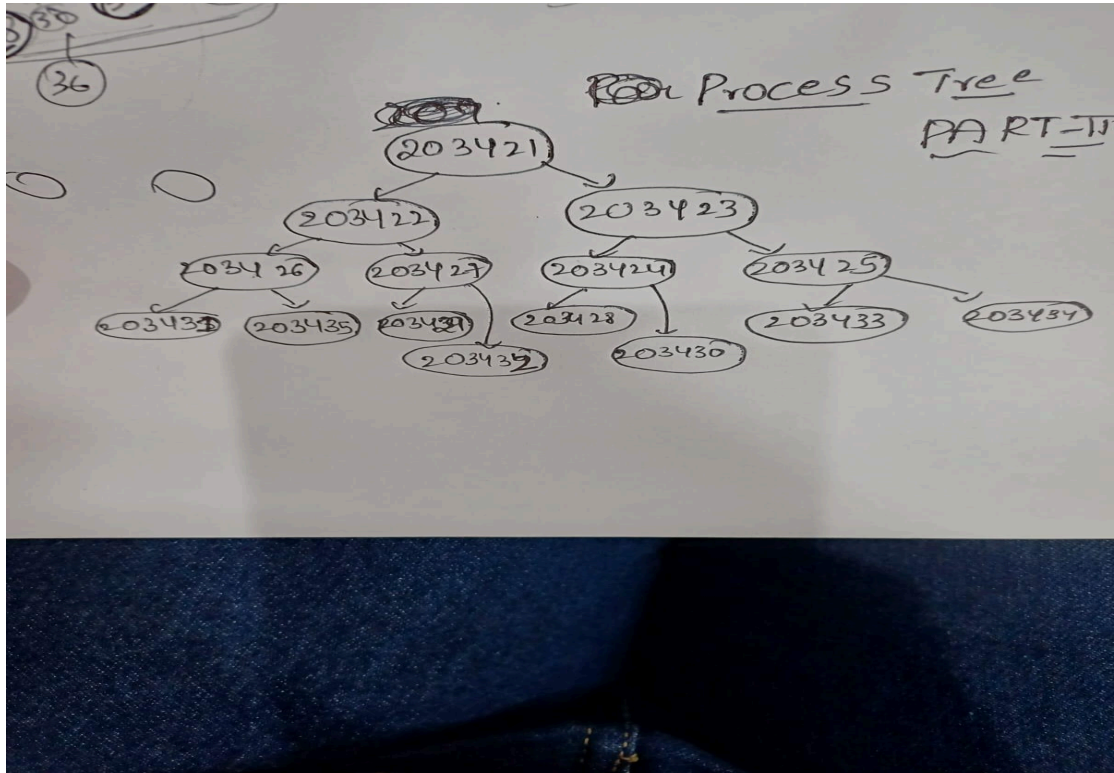# LAB-2(CS23BT013_CS23BT063)

2.

```
jaswika@Sona:/mnt/c/Users/jaswi/OneDrive/Desktop/lab2/src$ ./part2_partitioner.out file.txt NGTNIJGK 0 150 35
[203421] start position = 0 ; end position = 150
[203421] forked left child 203422
[203421] forked right child 203423
[203423] start position = 76 ; end position = 150
[203423] forked left child 203424
[203423] forked right child 203425
[203422] start position = 0 ; end position = 75
[203422] forked left child 203426
[203422] forked right child 203427
[203424] start position = 76 ; end position = 113
[203425] start position = 114 ; end position = 150
[203427] start position = 38 ; end position = 75
[203426] start position = 0 ; end position = 37
[203424] forked left child 203428
[203427] forked left child 203429
[203424] forked right child 203430
[203426] forked left child 203431
[203427] forked right child 203432
[203425] forked left child 203433
[203425] forked right child 203434
[203426] forked right child 203435
[203430] start position = 95 ; end position = 113
[203428] start position = 76 ; end position = 94
[203430] forked searcher child 203436
[203428] forked searcher child 203437
[203434] start position = 133 ; end position = 150
[203431] start position = 0 ; end position = 18
[203432] start position = 57 ; end position = 75
[203434] forked searcher child 203438
[203432] forked searcher child 203439
[203429] start position = 38 ; end position = 56
[203431] forked searcher child 203440
[203429] forked searcher child 203441
[203433] start position = 114 ; end position = 132
[203433] forked searcher child 203442
[203435] start position = 19 ; end position = 37
[203435] forked searcher child 203443
[203441] didn't find
[203440] didn't find
[203437] didn't find
[203442] didn't find
[203439] didn't find
[203436] didn't find
[203438] didn't find
[203429] searcher child 203441 returned
[203428] searcher child 203437 returned
[203431] searcher child 203440 returned
[203433] searcher child 203442 returned
[203432] searcher child 203439 returned
[203427] left child 203429 returned
[203430] searcher child 203436 returned
[203426] left child 203431 returned
[203425] left child 203433 returned
[203424] left child 203428 returned
[203424] right child 203430 returned
[203434] searcher child 203438 returned
[203427] right child 203432 returned
[203423] left child 203424 returned
[203425] right child 203434 returned
[203423] right child 203425 returned
[203443] didn't find
[203435] searcher child 203443 returned
[203426] right child 203435 returned
[203422] left child 203426 returned
[203422] right child 203427 returned
[203421] left child 203422 returned
[203421] right child 203423 returned
```

(36)

```
                          203421
                         /        \
                    203422        203423
                   /      \       /      \
              203426   203427  203424   203425
              /    \    /   \    |    \        \
        203431 203435 203439 203428 203429 203433  203434
                        203432  203430
```
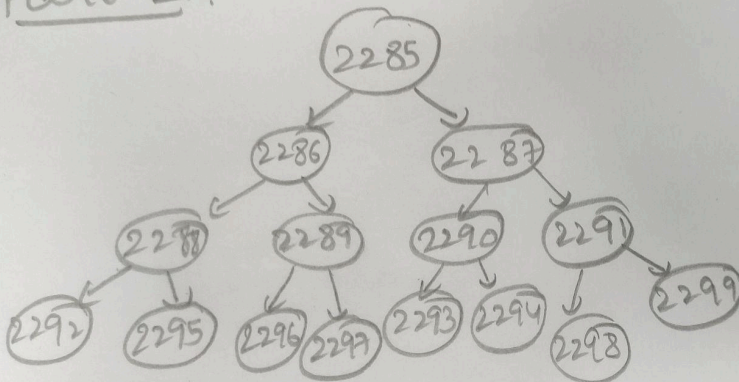
```
jaswika@Sona:/mnt/c/Users/jaswi/OneDrive/Desktop/lab2/src$ make run-part2 ARGS="file.txt NGTNIJGK 0 67108863 8388608"
./part2_partitioner.out file.txt NGTNIJGK 0 67108863 8388608
[2285] start position = 0 ; end position = 67108863
[2285] forked left child 2286
[2285] forked right child 2287
[2286] start position = 0 ; end position = 33554431
[2286] forked left child 2288
[2286] forked right child 2289
[2287] start position = 33554432 ; end position = 67108863
[2287] forked left child 2290
[2287] forked right child 2291
[2288] start position = 0 ; end position = 16777215
[2290] start position = 33554432 ; end position = 50331647
[2288] forked left child 2292
[2290] forked left child 2293
[2290] forked right child 2294
[2288] forked right child 2295
[2289] start position = 16777216 ; end position = 33554431
[2289] forked left child 2296
[2291] start position = 50331648 ; end position = 67108863
[2289] forked right child 2297
[2291] forked left child 2298
[2291] forked right child 2299
[2293] start position = 33554432 ; end position = 41943039
[2293] forked searcher child 2300
[2294] start position = 41943040 ; end position = 50331647
[2294] forked searcher child 2301
[2292] start position = 0 ; end position = 8388607
[2297] start position = 25165824 ; end position = 33554431
[2295] start position = 8388608 ; end position = 16777215
[2297] forked searcher child 2302
[2296] start position = 16777216 ; end position = 25165823
[2292] forked searcher child 2303
[2295] forked searcher child 2304
[2298] start position = 50331648 ; end position = 58720255
[2296] forked searcher child 2305
[2299] start position = 58720256 ; end position = 67108863
[2298] forked searcher child 2306
[2299] forked searcher child 2307
[2303] didn't find
[2307] found at 64520807
[2304] didn't find
[2292] searcher child 2303 returned
[2299] searcher child 2307 returned
[2295] searcher child 2304 returned
[2288] left child 2292 returned
[2288] right child 2295 returned
[2305] didn't find
[2301] didn't find
[2286] left child 2288 returned
[2300] didn't find
[2306] didn't find
[2296] searcher child 2305 returned
[2294] searcher child 2301 returned
[2293] searcher child 2300 returned
[2302] didn't find
[2298] searcher child 2306 returned
[2289] left child 2296 returned
[2290] left child 2293 returned
[2290] right child 2294 returned
[2291] left child 2298 returned
[2291] right child 2299 returned
[2287] left child 2290 returned
[2287] right child 2291 returned
[2297] searcher child 2302 returned
[2289] right child 2297 returned
[2286] right child 2289 returned
[2285] left child 2286 returned
[2285] right child 2287 returned
jaswika@Sona:/mnt/c/Users/jaswi/OneDrive/Desktop/lab2/src$
```

3.

```
    g parto_partitioner.cpp  o parto_partitioner.out
aswika@Sona:/mnt/c/Users/jaswi/OneDrive/Desktop/lab2/src$ make run-part3 ARGS="file.txt hello 0 200 50"
/part3_partitioner.out file.txt hello 0 200 50
[203467] start position = 0 ; end position = 200
[203467] forked left child 203468
[203467] forked right child 203469
[203468] start position = 0 ; end position = 100
[203469] start position = 101 ; end position = 200
[203468] forked left child 203471
[203469] forked left child 203470
[203469] forked right child 203472
[203468] forked right child 203473
[203473] start position = 51 ; end position = 100
[203470] start position = 101 ; end position = 150
[203473] forked searcher child 203474
[203470] forked searcher child 203475
[203472] start position = 151 ; end position = 200
[203471] start position = 0 ; end position = 50
[203471] forked left child 203476
[203472] forked searcher child 203477
[203471] forked right child 203478
[203476] start position = 0 ; end position = 25
[203478] start position = 26 ; end position = 50
[203476] forked searcher child 203479
[203478] forked searcher child 203480
[203475] didn't find
[203480] didn't find
[203477] didn't find
[203474] didn't find
[203479] didn't find
[203478] searcher child returned
[203473] searcher child returned
[203470] searcher child returned
[203472] searcher child returned
[203469] left child returned
[203469] right child returned
[203476] searcher child returned
[203471] left child returned
[203471] right child returned
[203468] left child returned
[203468] right child returned
[203467] left child returned
[203467] right child returned
```

```
jaswika@Sona:/mnt/c/Users/jaswi/OneDrive/Desktop/lab2/src$ make run-part3 ARGS="file.txt NGTNIJGK 0 67108863 8388608"
./part3_partitioner.out file.txt NGTNIJGK 0 67108863 8388608
[2980] start position = 0 ; end position = 67108863
[2980] forked left child 2982
[2980] forked right child 2983
[2982] start position = 0 ; end position = 33554431
[2982] forked left child 2984
[2982] forked right child 2985
[2983] start position = 33554432 ; end position = 67108863
[2983] forked left child 2986
[2983] forked right child 2987
[2987] start position = 50331648 ; end position = 67108863
[2987] forked left child 2988
[2987] forked right child 2989
[2985] start position = 16777216 ; end position = 33554431
[2985] forked left child 2990
[2985] forked right child 2991
[2984] start position = 0 ; end position = 16777215
[2984] forked left child 2992
[2984] forked right child 2993
[2986] start position = 33554432 ; end position = 50331647
[2986] forked left child 2994
[2986] forked right child 2995
[2988] start position = 50331648 ; end position = 58720255
[2988] forked searcher child 2996
[2991] start position = 25165824 ; end position = 33554431
[2991] forked searcher child 2997
[2993] start position = 8388608 ; end position = 16777215
[2993] forked searcher child 2998
[2992] start position = 0 ; end position = 8388607
[2992] forked searcher child 2999
[2989] start position = 58720256 ; end position = 67108863
[2989] forked searcher child 3000
[2995] start position = 41943040 ; end position = 50331647
[2990] start position = 16777216 ; end position = 25165823
[2995] forked searcher child 3001
[2990] forked searcher child 3002
[2994] start position = 33554432 ; end position = 41943039
[2994] forked searcher child 3003
[3000] found at position 64520807
[2999] received SIGTERM
[2997] received SIGTERM
[3002] received SIGTERM
[2990] received SIGTERM
[2991] received SIGTERM
[2995] received SIGTERM
[2993] received SIGTERM
[2980] received SIGTERM
[2986] received SIGTERM
[3003] received SIGTERM
[2994] received SIGTERM
[2996] received SIGTERM
[2992] received SIGTERM
[3000] received SIGTERM
[2985] received SIGTERM
[2998] received SIGTERM
[2984] received SIGTERM
[2989] received SIGTERM
[2988] received SIGTERM
[2987] received SIGTERM
[2982] received SIGTERM
[3001] received SIGTERM
[2983] received SIGTERM
Terminated
```