

gprof output:

Value of n= 10000

```
lt@lt-OptiPlex-3050: ~/Desktop
860 9861 9862 9863 9864 9865 9866 9867 9868 9869 9870 9871 9872 9873 9874 9875 9876 9877 9878 9879 9880 9881 9882 9883 9884 9885 9886 9887 9888
9889 9890 9891 9892 9893 9894 9895 9896 9897 9898 9899 9900 9901 9902 9903 9904 9905 9906 9907 9908 9909 9910 9911 9912 9913 9914 9915 9916 99
17 9918 9919 9920 9921 9922 9923 9924 9925 9926 9927 9928 9929 9930 9931 9932 9933 9934 9935 9936 9937 9938 9939 9940 9941 9942 9943 9944 9945
9946 9947 9948 9949 9950 9951 9952 9953 9954 9955 9956 9957 9958 9959 9960 9961 9962 9963 9964 9965 9966 9967 9968 9969 9970 9971 9972 9973 997
4 9975 9976 9977 9978 9979 9980 9981 9982 9983 9984 9985 9986 9987 9988 9989 9990 9991 9992 9993 9994 9995 9996 9997 9998 9999

lt@lt-OptiPlex-3050:~/Desktop$ gprof 111 gmon.out> 111.txt
lt@lt-OptiPlex-3050:~/Desktop$ gprof -a 111 gmon.out> 111.txt
lt@lt-OptiPlex-3050:~/Desktop$ cat 111.txt
Flat profile:

Each sample counts as 0.01 seconds.
 %   cumulative   self           self      total
time  seconds    seconds   calls   ms/call  ms/call  name
 54.88    0.06    0.06    9999    0.01    0.01  parting(int*, int, int)
 45.74    0.11    0.05 50004999    0.00    0.00  swap(int*, int*)
  0.00    0.11    0.00    1    0.00   110.68  quick_sort(int*, int, int)
  0.00    0.11    0.00    1    0.00    0.00  printing(int*, int)
  0.00    0.11    0.00    1    0.00   110.68  main

%
time      the percentage of the total running time of the
          program used by this function.

cumulative
seconds   a running sum of the number of seconds accounted
          for by this function and those listed above it.

self
seconds   the number of seconds accounted for by this
          function alone. This is the major sort for this
          listing.

calls     the number of times this function was invoked, if
          this function is profiled, else blank.

self
ms/call   the average number of milliseconds spent in this
          function per call, if this function is profiled,
          else blank.

total
ms/call   the average number of milliseconds spent in this
          function and its descendants per call, if this
          function is profiled, else blank.

name      the name of the function. This is the minor sort
          for this listing. The index shows the location of
          the function in the gprof listing. If the index is
```

```
lt@lt-OptiPlex-3050: ~/Desktop
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Call graph (explanation follows)

granularity: each sample hit covers 2 byte(s) for 9.03% of 0.11 seconds

index % time    self  children   called    name
-----
[1] 100.0    0.00    0.11      1/1      main [1]
      0.00    0.11      1+1      _libc_csu_init [4]
      0.00    0.11      1/1      main [1]
      0.00    0.11      1/1      quick_sort(int*, int, int) [3]
      0.00    0.00      1/1      printing(int*, int) [9]
      0.00    0.00      1/1      main [1]
-----
[2] 100.0    0.06    0.05 9999/9999  quick_sort(int*, int, int) [3]
      0.06    0.05 9999    parting(int*, int, int) [2]
      0.05    0.00 50004999/50004999  swap(int*, int*) [5]
-----
[3] 100.0    0.00    0.11      1/1      quick_sort(int*, int, int) [3]
      0.00    0.11      1+19998  main [1]
      0.00    0.11      9999/9999  parting(int*, int, int) [2]
      0.06    0.05 19998    quick_sort(int*, int, int) [3]
-----
[4] 100.0    0.00    0.11      1/1      <spontaneous>
      0.00    0.11      1/1      _libc_csu_init [4]
      0.00    0.11      1/1      main [1]
-----
[5] 45.5    0.05    0.00 50004999/50004999  parting(int*, int, int) [2]
      0.05    0.00 50004999  swap(int*, int*) [5]
-----
[9] 0.0    0.00    0.00      1/1      main [1]
      0.00    0.00      1/1      printing(int*, int) [9]
-----

This table describes the call tree of the program, and was sorted by
the total amount of time spent in each function and its children.

Each entry in this table consists of several lines. The line with the
index number at the left hand margin lists the current function.
```