Case 1 : For all PIDs

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_TXT

real    0m0.031s
user    0m0.008s
sys     0m0.016s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_TXT

real    0m0.026s
user    0m0.006s
sys     0m0.014s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_TXT

real    0m0.031s
user    0m0.009s
sys     0m0.016s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_TXT

real    0m0.031s
user    0m0.007s
sys     0m0.017s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.019s
user    0m0.003s
sys     0m0.009s
```

Averages of time for text file :

real	user	sys
0.0294	0.0086	0.0148

Standard derivation of time for the text file:

real	user	sys
0.0047159304490206	0.0020591260281974	0.0028705400188815

Table for size :

-rw------- 1 cidembah cscb09w23i 23K Mar 5 20:50 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 30K Mar 5 20:50 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 30K Mar 5 20:52 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 23K Mar 5 20:53 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 30K Mar 5 20:54 compositeTable.txt

Average of size :   27.2K   Standard derivation of size: 3.83405

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.020s
user    0m0.005s
sys     0m0.009s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.026s
user    0m0.004s
sys     0m0.015s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.023s
user    0m0.003s
sys     0m0.012s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.024s
user    0m0.007s
sys     0m0.010s
```

```
cidembah@iits-b473-13:/courses/courses/cscb09w23/cidembah/A2$ time ./showFDtables --output_binary

real    0m0.019s
user    0m0.003s
sys     0m0.009s
```

Averages of time for binary file :

real	user	sys
0.0224	0.0044	0.011

Standard derivation of time for the binary file:

real	user	sys
0.002576819745345	0.0014966629547096	0.0022803508501983

Table for size :

-rw------- 1 cidembah cscb09w23i 14K Mar 5 21:35 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 18K Mar 5 21:36 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 14K Mar 5 21:38 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 14K Mar 5 21:38 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 18K Mar 5 21:39 compositeTable.bin

Average of size : 15.6K   Standard derivation of size: 2.19089

Case 2 : For 1 Specfic PID

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_TXT

 real    0m0.032s
 user    0m0.011s
 sys     0m0.014s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_TXT

 real    0m0.029s
 user    0m0.011s
 sys     0m0.014s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_TXT

 real    0m0.032s
 user    0m0.008s
 sys     0m0.016s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_TXT

 real    0m0.031s
 user    0m0.012s
 sys     0m0.012s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_TXT

 real    0m0.029s
 user    0m0.007s
 sys     0m0.016s
```

Averages of time for text file :

real	user	sys
0.0306	0.0076	0.0116

Standard derivation of time for the text file:

real	user	sys
0.0013564659966251	0.0019390719429665	0.0014966629547096

Table for size :

-rw------- 1 cidembah cscb09w23i 2.6K Mar 5 21:48 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 2.4K Mar 5 21:50 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 2.6K Mar 5 21:51 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 2.6K Mar 5 21:52 compositeTable.txt
-rw------- 1 cidembah cscb09w23i 2.4K Mar 5 21:53 compositeTable.txt

Average of size : 2.52K   Standard derivation of size: 0.10954

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_binary

real    0m0.015s
user    0m0.002s
sys     0m0.007s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_binary

real    0m0.021s
user    0m0.008s
sys     0m0.008s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_binary

real    0m0.020s
user    0m0.002s
sys     0m0.010s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_binary

real    0m0.026s
user    0m0.007s
sys     0m0.013s
```

```
cidembah@iits-b473-13:~/cscb09w23_space/A2$ time ./showFDtables  71649 --output_binary

real    0m0.022s
user    0m0.008s
sys     0m0.007s
```

Averages of time for binary file :

real	user	sys
0.0208	0.0054	0.009

Standard derivation of time for the binary file:

real	user	sys
0.0035440090293339	0.0028	0.0022803508501983

Table for size :

-rw------- 1 cidembah cscb09w23i 1.5K Mar 5 21:45 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 1.5K Mar 5 21:47 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 2.1K Mar 5 21:50 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 1.5K Mar 5 21:51 compositeTable.bin
-rw------- 1 cidembah cscb09w23i 2.1K Mar 5 21:53 compositeTable.bin

Average of size : 1.74K   Standard derivation of size: 0.32863

Since I have for case 1:

text file   binary file

0.0294 > 0.0224 for real

0.0086 > 0.0044 for user

0.0148 > 0.011 for sys

27.2K > 15.6K for size

and for case 2:

text file   binary file

0.0306 > 0.0208 for real

0.0076 > 0.0054 for user

0.0116 > 0.009 for sys

2.52K > 1.74K for size

Therefore as we can see in both cases the binary files are more efficient with time and size.