TP 2-3-4-5 : Language C

# Partie 3 :

La fonction **lireMot** prend en paramètre un pointeur de fichier (déjà ouvert) et rempli le pointeur avec le prochain mot détecté dans le fichier. Il retourne **1** si il a trouvé un mot, et **0** si il a atteint la fin du fichier sans trouvé de mot.

Partie 4 :

Voir fichier Q4.c

Remarque : Si on a choisi une taille de tableau trop petite, lors de l'exécution sur le fichier fic9.txt on peut arriver à la fin du dictionnaire ce qui provoque l'arrêt prématuré du programme. Il faudrait donc songer à une allocation dynamique de ce tableau.

Partie 5 :

Voir fichier Q5.c

Lors de l'exécution sur le fichier fic9.txt nous ne rencontrons plus le soucis précédent.

# Partie 6 :

Le programme Q5 met légèrement plus de temps que Q4 pour traiter le fichier fic7.txt en terme de consommation mémoire le programme Q5 est aussi légèrement plus gourmand.

Pour le fichier fic0.txt, les deux fichiers sont égaux en temps d'exécution mais pour la consommation mémoire le programme Q5 est plus efficace.

De plus seul le programme Q5 est capable de traiter théoriquement des fichiers de taille infinie alors que Q4 est limité par la taille du dictionnaire.

# Annexes

Résultats programmes Q4 :

Command being timed: "./appli\_initiale (Q4) fic0.txt"

User time (seconds): **0.00**

System time (seconds): 0.00

Percent of CPU this job got: **0%**

Elapsed (wall clock) time (h:mm:ss or m:ss): 0:00.00

Average shared text size (kbytes): 0

Average unshared data size (kbytes): 0

Average stack size (kbytes): 0

Average total size (kbytes): 0

Maximum resident set size (kbytes): **552**

Average resident set size (kbytes): 0

Major (requiring I/O) page faults: 0

Minor (reclaiming a frame) page faults: 181

Voluntary context switches: 4

Involuntary context switches: 1

Swaps: 0

File system inputs: 0

File system outputs: 0

Socket messages sent: 0

Socket messages received: 0

Signals delivered: 0

Page size (bytes): 4096

Exit status: 47

Command being timed: "./appli\_initiale (Q4) fic7.txt"

User time (seconds): **0.14**

System time (seconds): 0.01

Percent of CPU this job got: **95%**

Elapsed (wall clock) time (h:mm:ss or m:ss): 0:00.16

Average shared text size (kbytes): 0

Average unshared data size (kbytes): 0

Average stack size (kbytes): 0

Average total size (kbytes): 0

Maximum resident set size (kbytes): **828**

Average resident set size (kbytes): 0

Major (requiring I/O) page faults: 0

Minor (reclaiming a frame) page faults: 251

Voluntary context switches: 3

Involuntary context switches: 9242

Swaps: 0

File system inputs: 0

File system outputs: 0

Socket messages sent: 0

Socket messages received: 0

Signals delivered: 0

Page size (bytes): 4096

Exit status: 4

## Résultats programmes Q5 :

Command being timed: "./appli\_initiale (Q5) fic0.txt"

User time (seconds): **0.00**

System time (seconds): 0.00

Percent of CPU this job got: **25%**

Elapsed (wall clock) time (h:mm:ss or m:ss): 0:00.00

Average shared text size (kbytes): 0

Average unshared data size (kbytes): 0

Average stack size (kbytes): 0

Average total size (kbytes): 0

Maximum resident set size (kbytes): **548**

Average resident set size (kbytes): 0

Major (requiring I/O) page faults: 0

Minor (reclaiming a frame) page faults: 180

Voluntary context switches: 4

Involuntary context switches: 1

Swaps: 0

File system inputs: 0

File system outputs: 0

Socket messages sent: 0

Socket messages received: 0

Signals delivered: 0

Page size (bytes): 4096

Exit status: 0

Command being timed: "./appli\_initiale (Q5) fic7.txt"

User time (seconds): **0.15**

System time (seconds): 0.01

Percent of CPU this job got: **95%**

Elapsed (wall clock) time (h:mm:ss or m:ss): 0:00.17

Average shared text size (kbytes): 0

Average unshared data size (kbytes): 0

Average stack size (kbytes): 0

Average total size (kbytes): 0

Maximum resident set size (kbytes): **900**

Average resident set size (kbytes): 0

Major (requiring I/O) page faults: 0

Minor (reclaiming a frame) page faults: 269

Voluntary context switches: 4

Involuntary context switches: 9243

Swaps: 0

File system inputs: 0

File system outputs: 0

Socket messages sent: 0

Socket messages received: 0

Signals delivered: 0

Page size (bytes): 4096

Exit status: 0

Command being timed: "./appli\_initiale (Q5) fic9.txt"

User time (seconds): **1.43**

System time (seconds): 0.03

Percent of CPU this job got: **83%**

Elapsed (wall clock) time (h:mm:ss or m:ss): 0:01.75

Average shared text size (kbytes): 0

Average unshared data size (kbytes): 0

Average stack size (kbytes): 0

Average total size (kbytes): 0

Maximum resident set size (kbytes): **1388**

Average resident set size (kbytes): 0

Major (requiring I/O) page faults: 0

Minor (reclaiming a frame) page faults: 390

Voluntary context switches: 28

Involuntary context switches: 22964

Swaps: 0

File system inputs: 0

File system outputs: 0

Socket messages sent: 0

Socket messages received: 0

Signals delivered: 0

Page size (bytes): 4096

Exit status: 0