|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Buffer Size** | **Real Time** | **User Time** | **System Time** | **% of time in sys time (sys time)/(real time)\*100%** |
| 1 | 1m37.612s | 0m43.086s | 0m54.494s | 54.494/97.612 = .558271  .558271\*100% = 55.827 % |
| 1,000 | 0m0.401s | 0m0.312s | 0m0.088s | 0.088/ 0.401 = .219451  .219451\*100% = 21.945 % |
| 100,000 | 0m0.399s | 0m0.338s | 0m0.061s | 0.061/ 0.399 = .152882  .152882 \* 100% = 15.288 % |

Keith Beauvais

CS 218- 1001

Assignment 7b

October 24, 2021

Summary:

The use of secondary memory will increase a systems runtime rather than accessing the main memory. By using a temporary storage (buffer) it will decrease the number of times we are accessing secondary storage thus reducing any overhead. As we can see from the data from 100,000 to 1,000 is not drastic but it is more efficient to run 100,000. But in the case of a buffer of 1 it almost doubles the percent of time in the system time from 1,000 and triples that of 100,000. With large files it is clear to use the larger buffer size to increase efficiency.