Final Project

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This project consists of creating a program that translates logical addresses to physical addresses for a virtual address space of 2^{16} bytes. The program will read from a text file with logical addresses and output the physical addresses.

The program has a TLB and a page table, which are used to help translate logical addresses to physical addresses. We also consider the fact that the physical memory size is smaller than the virtual address space. Since that is the case, we implemented a page replacement policy using the FIFO principle.

Our number of page faults and TLB hits all follow the correct answers provided.

```
[Josephs-Air-2:Project josephvaracalli$ cc Project.c                          ]
[Josephs-Air-2:Project josephvaracalli$ ./a.out BACKING_STORE.bin addresses.txt  ]
Number of Translated Addresses = 1000
Page faults = 244
Page Fault Rate = 24.4 %
TLB Hits = 54
TLB Hit Rate = 5.400 %
```

Figure 1

When you do run the program, you must run it with the arguments BACKING_STORE.bin first and addresses.txt second, as shown in Fig. 1.