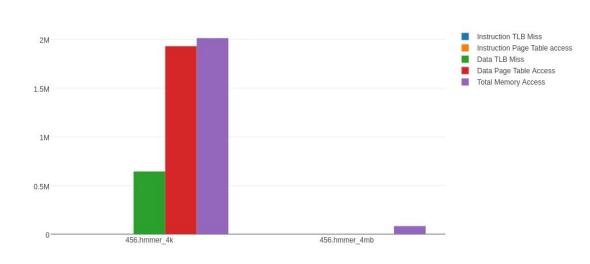
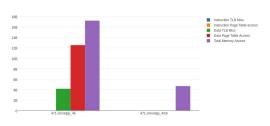


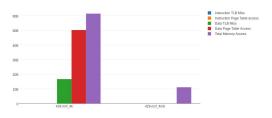
Project 2

Alceu Bissoto, 191077

SPEC

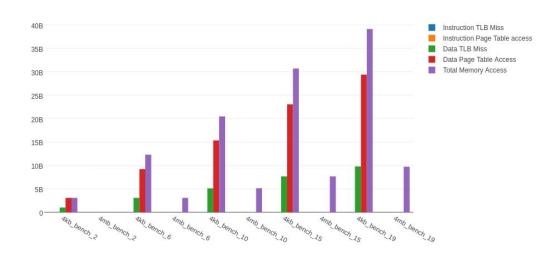






Toy benchmark

```
int page_size = 4*1024;
  int tlb_size = 512;
  # variando k de 2 a 20.
  std::vector<int> vetor(tlb_size*page_size*k);
  for (int h=0; h<1000; h++) {
     for(int i=0; i<1000; i++) {
        for (int j=0; j<tlb_size*k; j++) {
          vetor[j*page_size]++;
        }
    }
  }
}</pre>
```



Toy benchmark

```
#page size muito maior.
int page size = 1024*1024;
                                                                                                                                 Instruction TLB Miss
                                                                                                                                  nstruction Page Table access
int tlb size = 512;
                                                                                                                                 Data TLB Miss
                                                          3.5B
                                                                                                                                 Data Page Table Access
int k=2
                                                                                                                                 Total Memory Access
std::vector<int> vetor(tlb_size*page_size*k);
for (int h=0; h<1000; h++) {
                                                           2B
   for(int i=0; i<1000; i++) {
                                                          1.5B
      for (int j=0; j<tlb size*k; j++) {
         #escritas mais distantes entre si.
                                                           1B
         vetor[j*page size]++;
                                                          0.5B
                                                                        4kb bench bigger
                                                                                                       4mb bench bigger
```

Obrigado!