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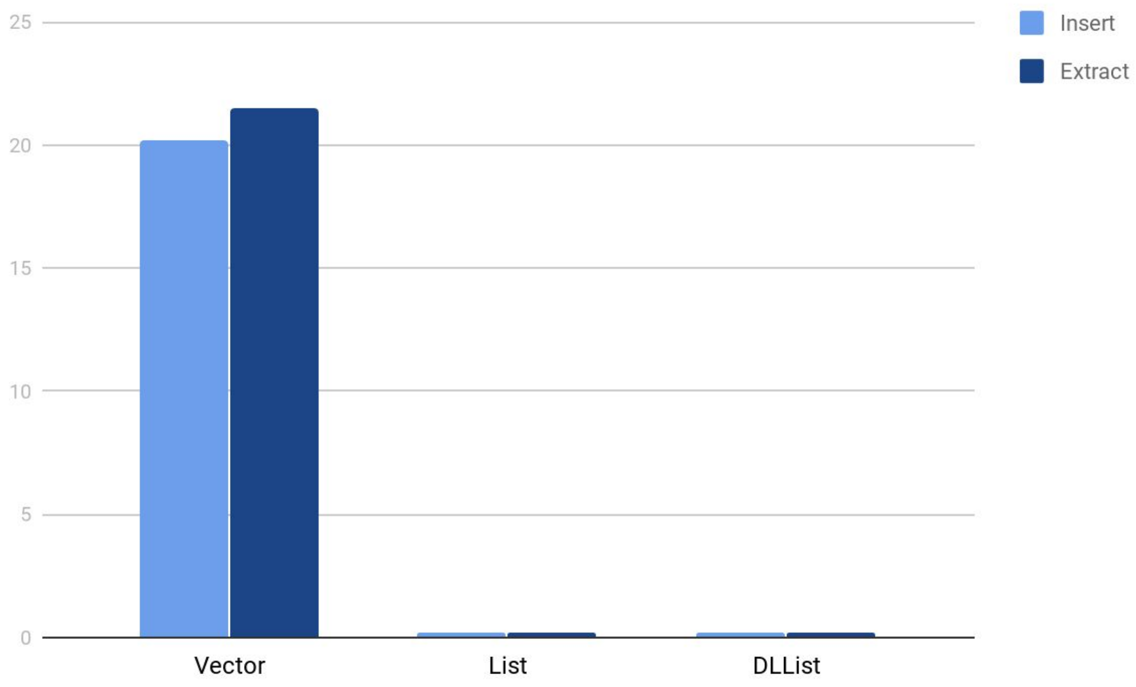
Comparative Document

First Position Test:



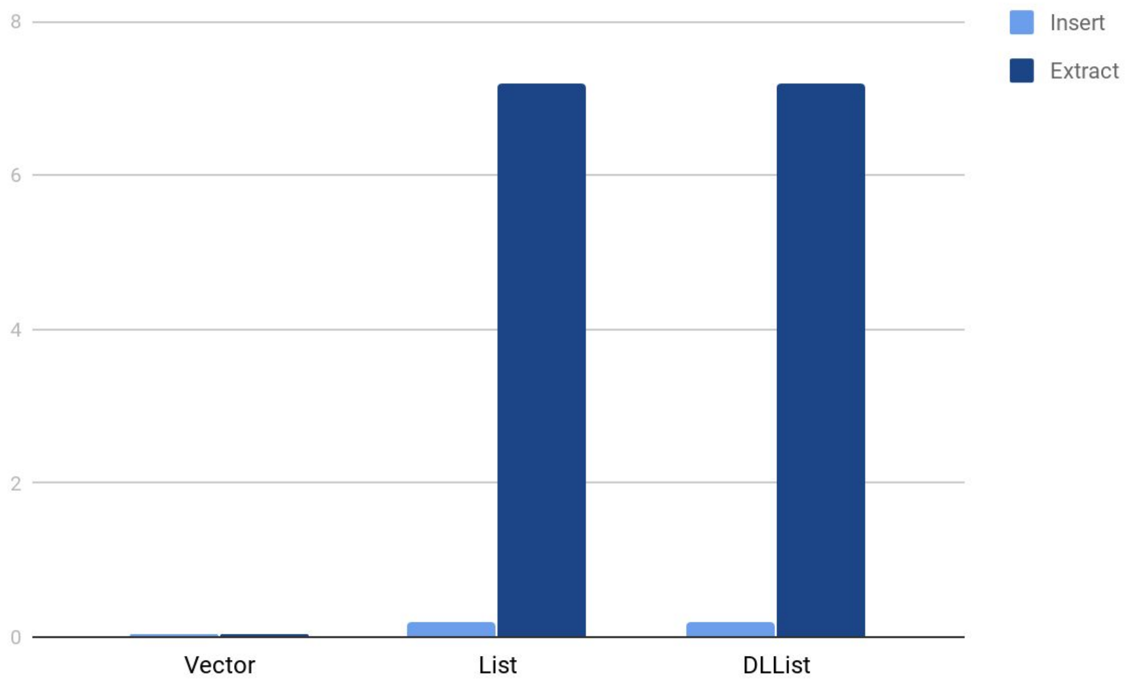
Values:

- Vector:
    - 20.19950
    - 21.50119
- List:
    - 0.225100
    - 0.176300
- DLList:
    - 0.203300
    - 0.193300

As we can see here, the Vector has the highest time when inserting and extracting in the first position. The other two have a similar time.

If we are going to use the insertfirst and extract first function, it isn't recommendable to use the vector.

Last Position Test:



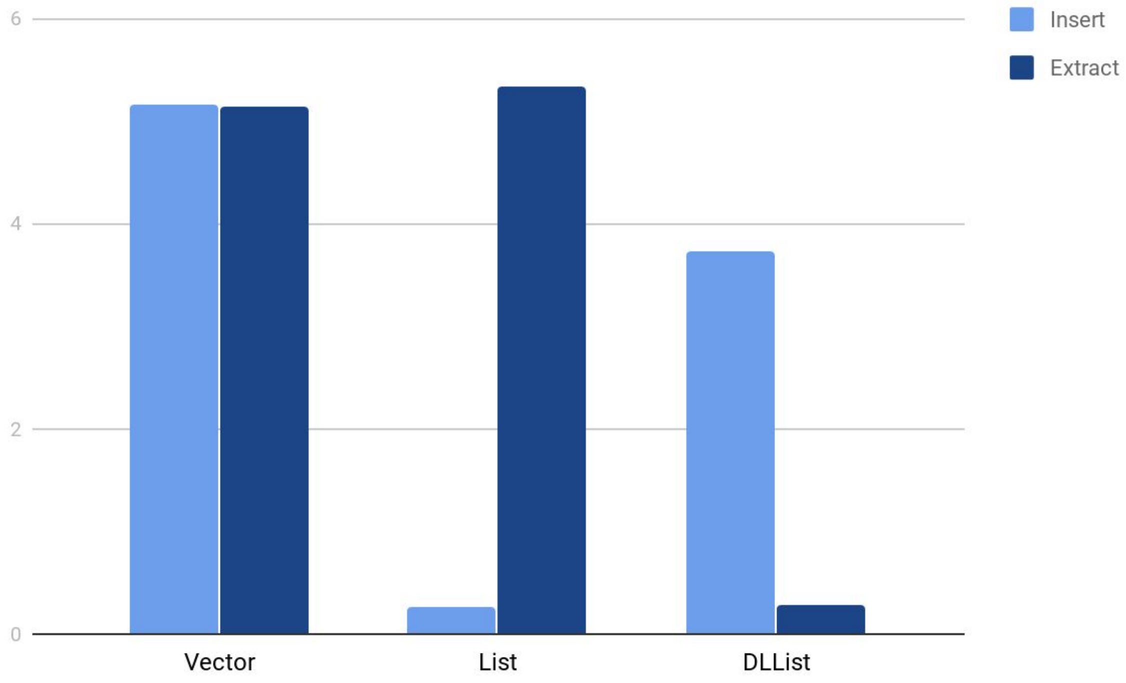
Values:

Vector:
0.046200
0.046200
List:
0.191700
7.185100
DLList:
0.200800
7.257700

In this function is the Vector that have the small amount of time, the difference between the Vector and the Lists is really big, particularly in the **extract last** function, where the times soar.

If the function we will be using are **Last functions** the vector is our best choice with a big difference.

At Position Test:



Values:

- Vector:
  - 5.168600
  - 5.139900
- List:
  - 0.278200
  - 5.341200
- DLList:
  - 3.733000
  - 0.296900

In this function is the DLList that have the small amount of time, since is a heavy function, the times aren't so different, but the vector would be the worst, because it has the biggest time in both functions.

If the function we will be using are **At functions** the Dllist is our best choice with a big difference.

Overall:

Depending on the situation and the usage we are going to do, the TAD selected should be different. If we need to insert and extract in the first position the vector should be avoid as our selection, the times are to high in this TAD.

But if is the last functions we should use the Vector as a TAD without doubt since the times and too low again with a big difference between the Lists. And if is At functions, since is a heavy function, the impact on the performance will be low, but the best for this case is DLList.