

Fichier histogramme.cpp

```
////////////////////////////////////  
// Versions a paralleliser .  
////////////////////////////////////  
  
int nb_occurrences_par( int val, int elems[], int nb )  
{  
    return parallel_reduce(  
        blocked_range<size_t>(0, nb),  
        0,  
        [=]( blocked_range<size_t> r, int nb_occs ) {  
            for( size_t k = r.begin(); k < r.end(); k++ ) {  
                if ( elems[k] == val ) { nb_occs += 1; }  
            }  
            return nb_occs;  
        },  
        std::plus<int>()  
    );  
//
```

```

int* histogramme_par( int elems[], int nb, int valMax )
{
    // On alloue et on initialise l'histogramme.
    int *histo = (int*) malloc( (valMax+1) * sizeof(int) );

    parallel_for( blocked_range<size_t>(0, valMax+1),
        [=]( const blocked_range<size_t> r ) {
            for( size_t val = r.begin(); val < r.end(); val++ ) {
                histo[val] = nb_occurrences_par( val, elems, nb );
            }
        }
    );

    return histo;
}

```