Common API

omp_set_nested(1);
omp_set_dynamic(0);
omp_set_max_active_levels(8);
omp_set_num_threads(2);

#pragma omp parallel for
#pragma omp parallel num_threads(2) shared(x)
#pragma omp **barrier**
#pragma omp flush(flag, data)
#pragma omp parallel num_threads(3)
#pragma omp **single**
#pragma omp parallel default(shared) **private**(iam,nt,ipoints,istart)
#pragma omp parallel proc_bind(spread) num_threads(4)

#pragma omp for **nowait**
#pragma omp for schedule(static) nowait

#pragma omp for **collapse**(2) private(i, k, j)

#pragma omp **parallel sections**
#pragma omp section

#pragma omp **task**

#pragma omp task shared(x) **depend**(out: x)

#pragma omp **critical** (xaxis)

#pragma omp **atomic** update

#pragma omp **flush**

#pragma omp **cancel** parallel

flush: make all threads have the same view of memory for all shared objects.

Examples

```
#pragma omp parallel shared(a,b,c,nthreads,chunk) private(i,tid)
  {
  tid = omp_get_thread_num();
  if (tid == 0)
    {
    nthreads = omp_get_num_threads();
    printf("Number of threads = %d\n", nthreads);
    }
  printf("Thread %d starting...\n",tid);

  #pragma omp for schedule(dynamic,chunk)
  for (i=0; i<N; i++)
    {
    c[i] = a[i] + b[i];
    printf("Thread %d: c[%d]= %f\n",tid,i,c[i]);
    }

  }  /* end of parallel section */
```

Tutorials

#pragma omp sections
(http://cs.nyu.edu/courses/fall12/CSCI-GA.3033-012/lecture7.pdf)

consumer-producer
http://heather.cs.ucdavis.edu/~matloff/OpenMP/Examples/NM/ProdCons.c

OpenMP Application Programming Interface, v4.0.4 march 2015
http://www.openmp.org/wp-content/uploads/openmp-examples-4.0.2.pdf

private
https://michaellindon.github.io/lindonslog/programming/openmp/openmp-tutorial-firstprivate-and-lastprivate/