

Sections Construct (9A)

- Loop
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sections construct

- a **non-iterative** worksharing construct
- contains a set of structured blocks
- each structured block
 - are distributed among **threads** in a team
 - executed once by one of the **threads** in a team
 - in the context of its **implicit task**.

<https://pages.tacc.utexas.edu/~eijkhout/pcse/html/omp-parallel.html>

sections construct

```
#pragma omp sections [clause[ [,] clause] ... ] new-line
{
  [#pragma omp section new-line]
  structured-block
  [#pragma omp section new-line]
  structured-block]
  ...
}
```

where **clause** is one of the following:

private(list)

firstprivate(list)

lastprivate([lastprivate-modifier:] list)

reduction([reduction-modifier ,] reduction-identifier : list)

allocate([allocator :] list)

nowait

<https://www.openmp.org/spec-html/5.0/openmpsu37.html#x59-1010002.8.1>

section construct

```
#pragma omp sections [clause[ [,] clause] ... ] new-line
{
  [#pragma omp section new-line]
  structured-block
  [#pragma omp section new-line]
  structured-block]
...
}
```

When program execution reaches a **omp sections** directive, program segments defined by the following **omp section** directive are distributed for parallel execution among available threads.

A barrier is implicitly defined at the end of the larger program region associated with the **omp sections** directive unless the `nowait` clause is specified.

<https://www.openmp.org/spec-html/5.0/openmpsu37.html#x59-1010002.8.1>

References

- [1] en.wikipedia.org
- [2] M Harris, <http://beowulf.lcs.mit.edu/18.337-2008/lectslides/scan.pdf>