

OpenMP - section parallelization

Section parallelization: at **Print value**, the value of **x** could be either **2** or **5**, depending on the timing of the threads, and the implementation of the assignment to **x**.

```
#include <stdio.h>
#include <omp.h>

int main(){
    int x;
    x = 2;
    #pragma omp parallel num_threads(2) shared(x)
    {
        if (omp_get_thread_num() == 0) {
            x = 5;
        } else {
            /* Print A: the following read of x has a race */
            printf("A: Thread# %d: x = %d\n", omp_get_thread_num(), x );
        }

        #pragma omp barrier

        if (omp_get_thread_num() == 0) {
            /* Print B */
            printf("B: Thread# %d: x = %d\n", omp_get_thread_num(), x );
        } else {
            /* Print C */
            printf("C: Thread# %d: x = %d\n", omp_get_thread_num(), x );
        }
    }
    return 0;
}
```