

### Thread Safe Memory Pool

Implement a memory pool that returns/frees only one type of object, and make it thread safe.

```
template <class ELEM_TYPE> class MemoryPool { ELEM_TYPE* alloc(); void  
free(ELEM_TYPE*) }
```

Your goal is to make it production ready with testing, benchmarking etc. Using Google Test or Google Benchmark is a plus.

Submission: Please send us a link to your GitHub repo with the code. If you include tests, please include a brief README on how to run them. Any other documentation that you would like to submit is welcome.

Duration: We recommend spending 2-3 hours on this problem.