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Dry part – MTM ex2

Part A solution:

```
template <class T>
std::vector<T> slice(std::vector<T> vec, int start, int step, int stop) {
    if (start < 0 || start >= vec.size())
        throw BadInput();

    if (stop < 0 || stop > vec.size())
        throw BadInput();

    if (step <= 0)
        throw BadInput();

    if (start >= stop)
        return std::vector<T>{};

    std::vector<T> to_send{};
    for (int i = start; i < stop; i+=step )
        to_send.push_back(vec[i]);

    return to_send;
}
```

Part B solution:

```
#include "memory"
class A {
public:
    std::vector<std::shared_ptr<int>> values;

    void add(int x) {
        std::shared_ptr<int> ptr(new int (x));
        values.push_back(ptr);
    }
};
```