

# Mutex

→ Mutual Exclusion

⇒ Mutex is used to avoid race condition.

→ When two or more threads/process happened to change a common data at same time.

⇒ We use `lock()` and `unlock()` on mutex to avoid race condition.

⇒ Race condition does not happen when two or more thread/process just access a common data without changing it.

```
#include <iostream>
#include <thread>
#include <mutex>
using namespace std;

int myAmount = 0;
std::mutex m;

void addMoney() {
    m.lock();
    ++myAmount; ✓
    m.unlock();
}

int main() {
    std::thread t1(addMoney);
    std::thread t2(addMoney);

    t1.join();
    t2.join();

    cout << myAmount << endl;
    return 0;
}
```

→ Example