- The biggest introduction made in C++11
- Memory memory deals with:
    - atomic operations
    - visible effects of these operations
    - atomic access to object members given memory layout

is this code thread safe??

```
struct S
{
  long a;
  char b;
 };

 //update a
 auto f = [&s]()
 {
    s.a = 10;
};

//upddate b
auto g = [&s]()
{
    s.b = 20;
};

//sample how to exploit memory model objects layout
auto fut1 = std::async(std::launch::async,f);
auto fut2 = std::async(std::launch::async,g);

fut1.wait();
fut2.wait();
```