

2. Processes, Threads & Thread Pool

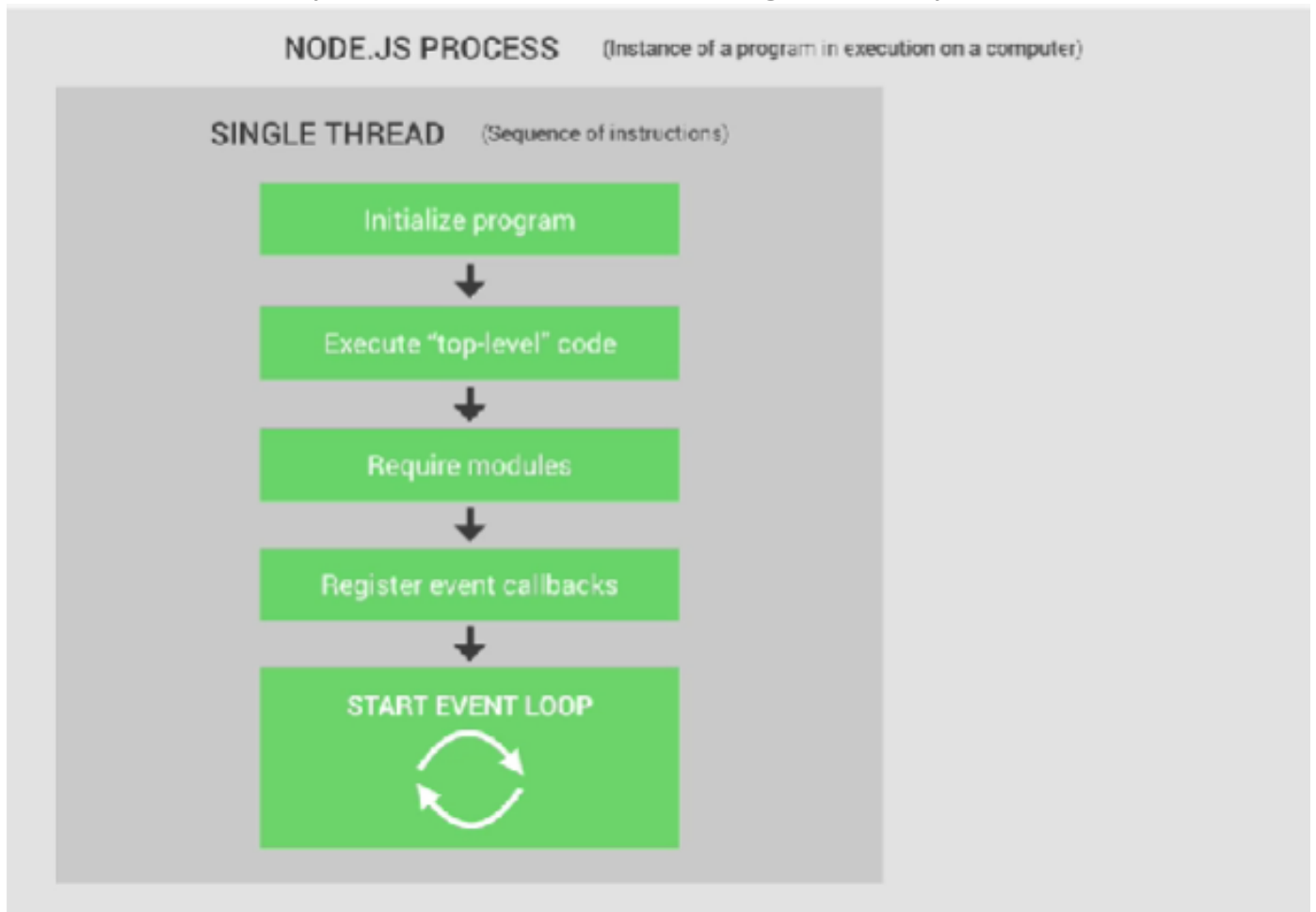
Friday, May 24, 2024

11:42 AM

Node.js = a process running a C++ program

Single Thread = A box running in a computer

We must be very careful for not blocking our only Thread

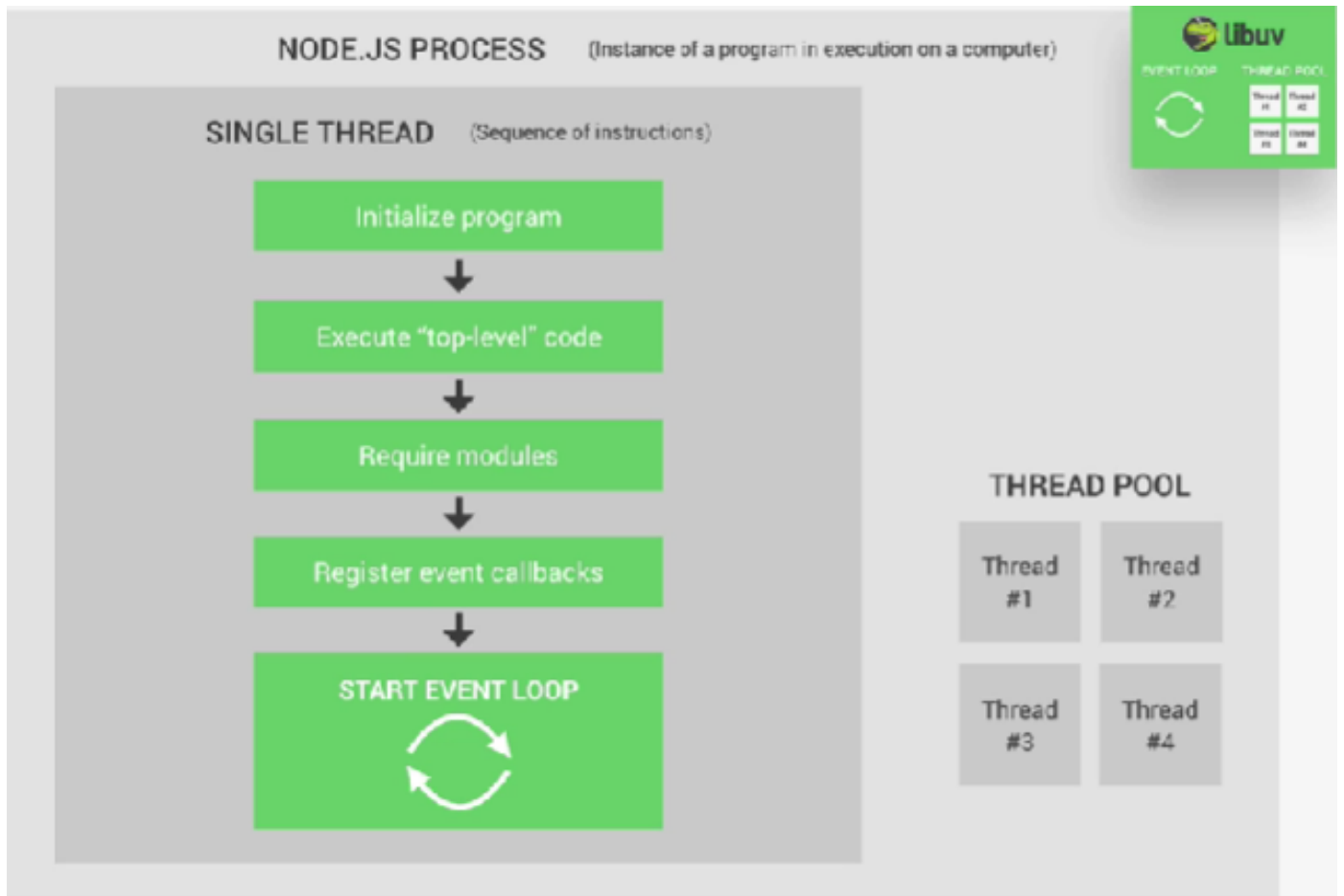


Some tasks registered in the Event Loop may be too heavy or expensive (CPU & RAM) draining to execute, thus blocking the Event Loop

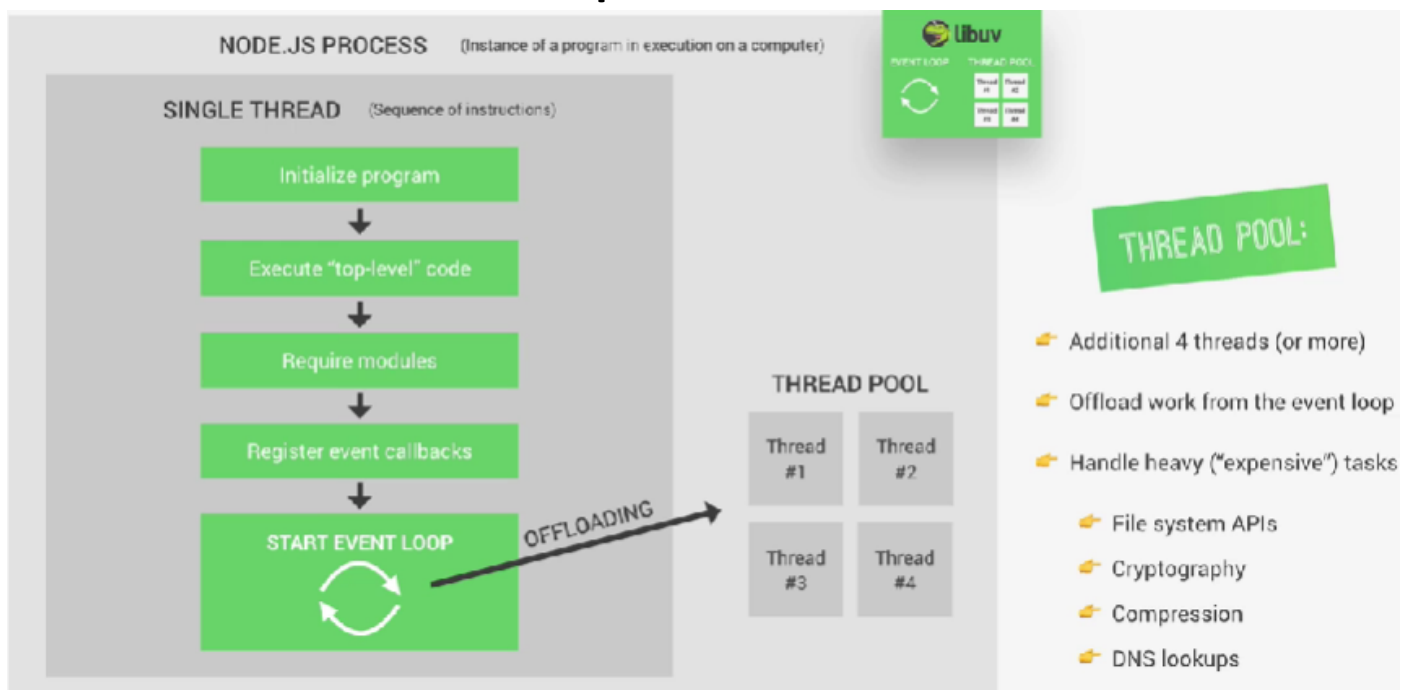
Libuv library provides us a **Thread Pool**

Thread Pool gives 4 additional threads (or more) which is completely separated from our single thread

Max. Thread = 128 Threads



Event Loop can automatically offload heavy tasks to Thread Pool
to avoid Block our Event Loop



File System APIs e.g. `fs.writeFile()` to extract users' input into files saved on host machine

Cyptography e.g. Bcrypt to hash passwords

Compression

DNS lookups