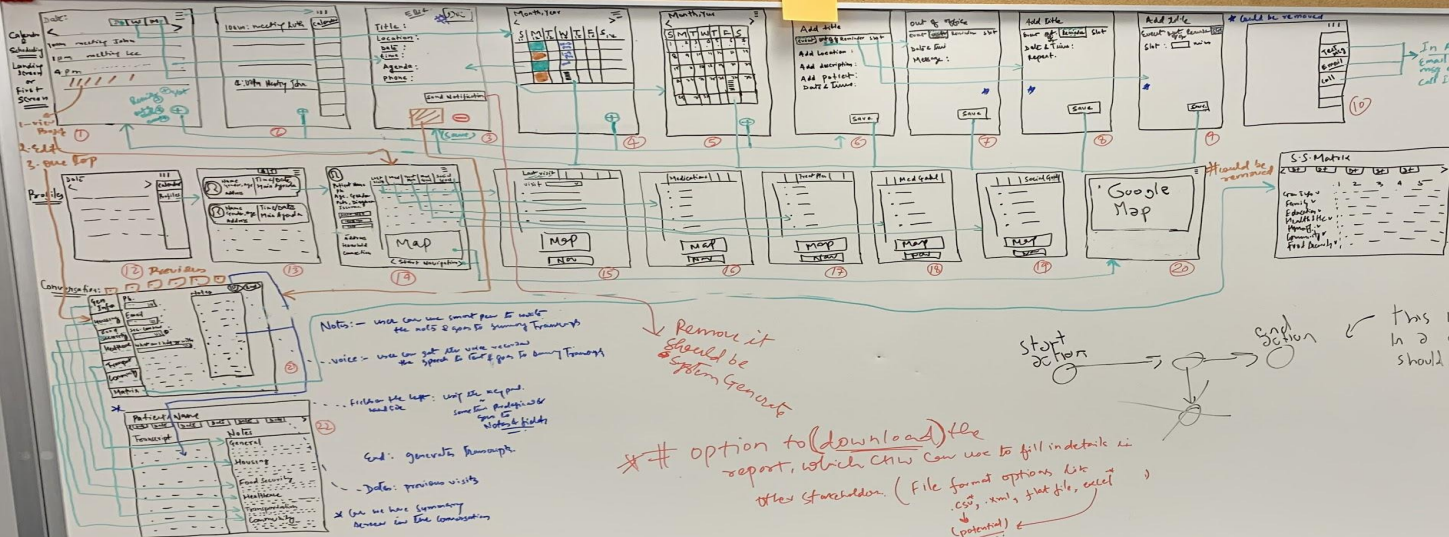


CS 342 Software Design

- **All lectures will be online (same day and time)**
- **Still figuring out office hours(online or in person)**
- **Threads in Java**
- **Server-Client with threads**
- **Exams back before spring break**



Edit option in the meeting schedule.

* Profile also editable or not by user already from EHR

only in 3 months

Blocking Methods:

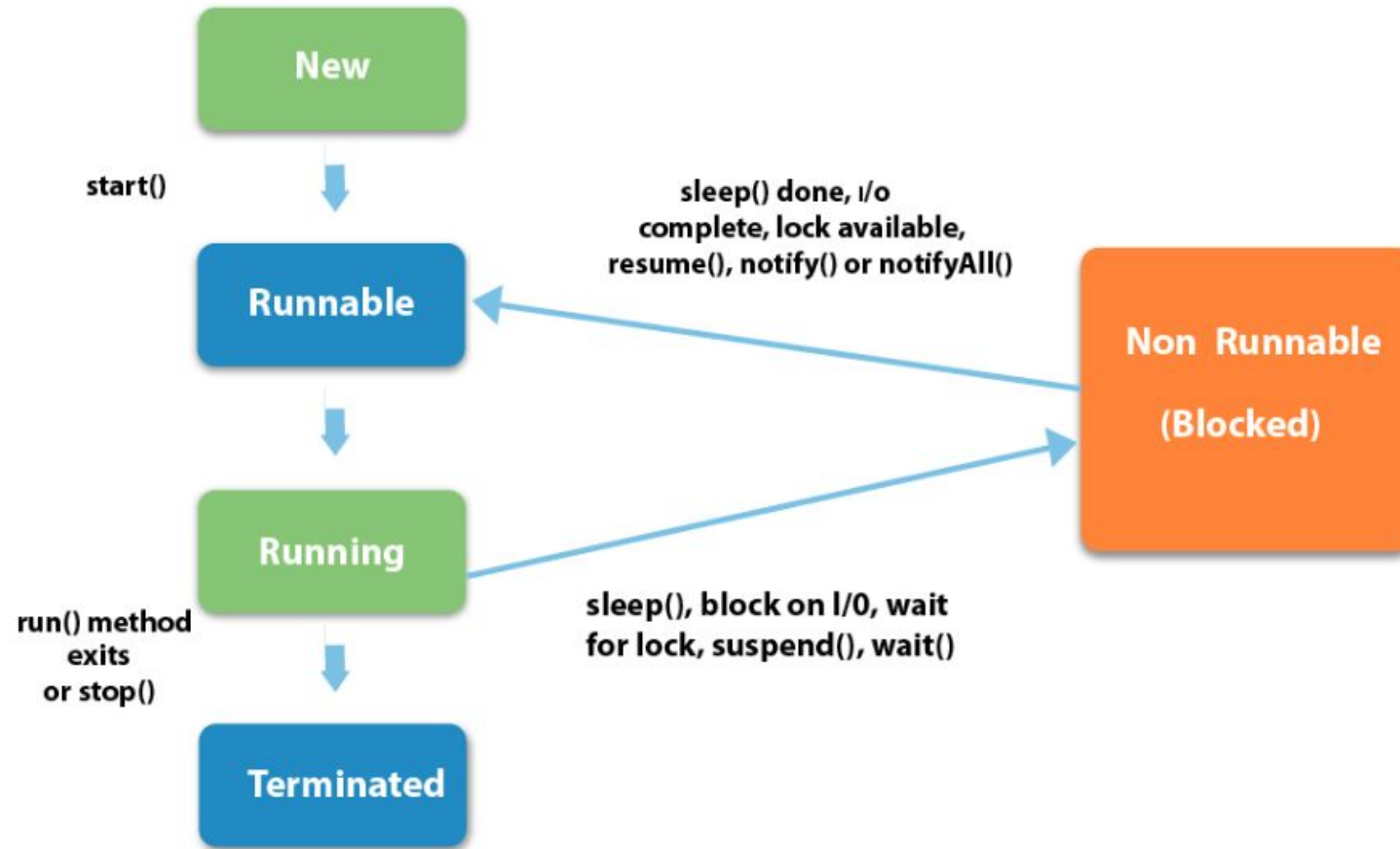
Blocking methods put Current thread on blocking position until method returns like `ServerSocket accept()` method which blocks until a client `Socket` connects to Server.

Most GUI applications have a single UI thread: most GUI applications are multithreaded

Threads: “light weight process”

- Enable two or more tasks to execute concurrently within a single process.
- A thread is an independent path of execution within a program
- Threads share the same address space; can share data and code

Thread Lifecycle:



Two ways: 1) Extend Thread

Inherit from class Thread

Implement abstract method `public void run(){}`

Can call Thread methods directly in the class(more flexibility)

```
Class MyThread extends Thread{  
    MyThread(){}  
    public void run(){}  
}
```

```
MyThread t1 = new MyThread();  
t1.start();
```

Two ways: 2) Implement Runnable

Class is intended to be run as a thread

Allows you to still extend another class

Runnable is a functional interface

Implement method `public void run(){}`

Create a new Thread with Runnable as parameter

`Thread.start()`

```
Class myRunnable  
implements Runnable{
```

```
    myRunnable(){}  
    public void run(){}  
}
```

```
MyRunnable mr = new ....  
Thread t1 = new Thread(mr);  
t1.start();
```