

```
public class SemaphoreMediumTermScheduler implements IMediumTermScheduler {
    Semaphore NumProcs;
    Semaphore Running;
    Semaphore lockOut = new Semaphore(1);

    public SemaphoreMediumTermScheduler () {
        int w = (int)java.lang.Math.floor((double)N/(double)K);
        System.out.println("W is: " + w);
        NumProcs = new Semaphore(w);
        Running = new Semaphore(0);
    }
    public void addProcess () {
        NumProcs.P();
        Running.V();
    }
    public void removeProcess () {
        Running.P();
        NumProcs.V();
    }
}
```