Sergi Cels Santiago
Àlex González Jubany
Pol Rios Creus

Pràctica 2 Pseudocode

a)

MONITOR SushiMonitor_01

```
        Condition canEat;
        private int freeSeats = 5;
        private boolean group=false;
        private final int MAX_CAPACITY=5;

        void enter (int i)
                println("----> Entering C("+i+")");
                while(freeSeats==0 || group)
                        if(!group)
                                group=true;
                                println("*** Possible group detected. I wait C("+i+")");
                        else
                                println("*** I'm told to wait for all free C("+i+")");
                        waitC(canEat);

                println("+++ [free: "+freeSeats+"] I sit down C("+i+")");
                freeSeats--;

        void exit (int i)
                freeSeats++;
                if(freeSeats==MAX_CAPACITY && group)
                        group=false;
                println(""---> now leaving [free: "+freeSeats+"] C("+i+")");
                signalC(canEat);
```

END of MONITOR SushiMonitor_01

Sergi Cels Santiago
Àlex González Jubany
Pol Rios Creus
b)


```
MONITOR SushiMonitor_02
        Condition canEat;
        private int freeSeats = 5;
        private boolean group=false;
        private int nextTicket=0;
        private int nowServing=0;
        private final int MAX_CAPACITY=5;

        void enter (int i)
                int myTicket=nextTicket;
                boolean firstWait=true;
                nextTicket++
                println("----> Entering C("+i+")");
                while(freeSeats==0 || group || myTicket!=nowServing)
                        if(!group && freeSeats==0)
                                group=true;
                                println("*** Possible group detected. I wait C("+i+")");
                        else if (group && firstWait)
                                println("*** I'm told to wait for all free C("+i+")");
                        if (freeSeats!=0 && !group)
                                signalC(canEat)
                        waitC(canEat);

                println("+++ [free: "+freeSeats+"] I sit down C("+i+")");
                nowServing++
                freeSeats--

        void exit (int i)
                freeSeats++;
                if(freeSeats==MAX_CAPACITY && group)
                        group=false;
                println(""---> now leaving [free: "+freeSeats+"] C("+i+")");
                signalC(canEat);

END of MONITOR SushiMonitor_02
```

Sergi Cels Santiago
Àlex González Jubany
Pol Rios Creus

c)

```
MONITOR SushiMonitor_03
        Condition canEat;
        private int freeSeats = 5;
        private boolean group=false;
        private int nextTicket=0;
        private int nowServing=0;
        private final int MAX_CAPACITY=5;
        private int vipWaiting=0


        void enterVIP(int i)
                println("----> Entering VIPC("+i+") ");
                while(freeSeats==0)
                        vipWaiting++;
                        waitC(canEat);
                        vipWaiting--;
                println("+++ [free: "+freeSeats+"] I sit down VIPC("+i+")");
                freeSeats--;
                group=false;

        void exitVIP(int i)
                freeSeats++
                if(freeSeats==MAX_CAPACITY && group)
                        group=false;
                println("---> now leaving [free: "+freeSeats+"] VIPC("+i+")");
                signalC(canEat);

        void enter (int i)
                int myTicket=nextTicket;
                boolean firstWait=true;
                nextTicket++
                println("----> Entering C("+i+")");
                while(freeSeats==0 || group || myTicket!=nowServing || vipWaiting!=0)
                        if(!group && freeSeats==0)
                                group=true;
                                println("*** Possible group detected. I wait C("+i+")");
                        else if (group && firstWait)
                                println("*** I'm told to wait for all free C("+i+")");
                        if (freeSeats!=0 && !group)
                                signalC(canEat)
                        waitC(canEat);

                println("+++ [free: "+freeSeats+"] I sit down C("+i+")");
                nowServing++
                freeSeats--
```

Sergi Cels Santiago
Àlex González Jubany
Pol Rios Creus

```
        void exit (int i)
                freeSeats++;
                if(freeSeats==MAX_CAPACITY && group)
                        group=false;
                signalC(canEat);
                println(""---> now leaving [free: "+freeSeats+"] C("+i+")");

END of MONITOR SushiMonitor_03
```