

monitor Conference Room

int capacity  
int entered  
condition seats  
bool speaking

enter() {

while (speaking || (entered == capacity))

seats.wait();

entered = entered + 1;

}

speakerArrives() {

while (entered > 40) {

speaking = true;

// speak

speaking = false;

entered = 0;

seats.signalAll();

}

}

}

Thread Speaker {

speakerArrives()

sleep(5000)

}

Thread Audience {

enter()

}

repeat 3 { // produce 3  
speaker speakers

}

monitor ConferenceRoom {

int entered

int capacity

condition seats

bool speaking

enter() {

while ( speaking || (entered == capacity))

seats.wait;

entered = entered + 1;

}

speakerArrives() {

while (entered == 0)

sleep(5000);

speaking = true

// talks

speaking = false

entered = 0

seats.signalAll

}

}

Thread Speaker {

speakerArrives()

sleep(5000);

}

Thread person {

enter()

}

book 5 ex. 6 Blood donations

sem get-bed [4];

sem get-mag [10];

Active roles

The Donor

[The Beds

[The Magazines] shared resources

Donor {

int mag = 0; // to know if you have a mag

int bed = 0; // to know if you have a bed

thread bed {

acquire(get-bed)

bed = 1

if (mag == 1) {

mag = 0

release(get-mag)

}

// give blood

bed = 0

release(get-bed)

thread mag {

acquire(get-mag)

if (bed == 1)

release(get-mag)

else {

mag = 1

// read

if (bed == 0)

mag = 0

release(get-mag)

}

}