UNIT 12A
Simulation: An Example

Flu Virus Simulation
States

0  white  healthy
1  pink   infected
2  red    contagious (day 1)
3  red    contagious (day 2)
4  red    contagious (day 3)
5  red    contagious (day 4)
6  purple immune (non-contagious)

Display of 400 people
Displaying one person

Events by chance

If a healthy person contacts a contagious person, she gets sick 40% of the time.

```java
if contagious?(matrix, rand(20), rand(20))
    and rand(100) < 40 then
    newmatrix[i][j] = 1
end
```
Neighbors

cell = matrix[i][j]

north = matrix[i-1][j]  NO!

if i == 0 then  YES!
    north = nil
else
    north = matrix[i-1][j]